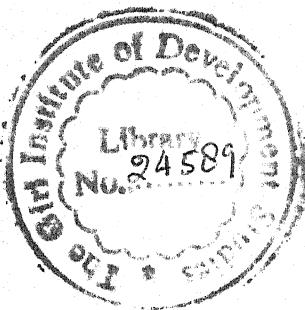


Survey of Research on Development of Uttar Pradesh



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PREFACE

A number of surveys covering review of literature on economic development in India have come out over the last two decades or so mostly under the auspices of Indian Council of Social Science Research. Most of this literature covers the issues of development policy at the national level. At the same time, a large and growing body of literature has accumulated over time dealing with the growth experience and problems specific to different states and regions. However, a large part of these research studies is either not well known or not easily available to the research scholars leading to lack of coordination and unnecessary duplication of research. The present study, sponsored by the Indian Council of Social Science Research, is a modest attempt in this direction.

The present study is based upon a survey of literature on the development of Uttar Pradesh, one of the least developed states of the country. Specifically, the study is proposed to cover broadly the various aspects of development on agriculture and industry, unorganised sector and urban development and infrastructure.

(ii)

It may be mentioned that, besides published studies, such as, books, reports, journals, articles, we have also covered unpublished materials in the form of doctoral theses, project reports and monographs from various research institutions and government departments. We, however, do not claim that we have covered all the published and unpublished materials, but we do hope that not much is missed in terms of research ideas. Our objective is not merely to give a review of literature but mainly to highlight the major problems and issues that emerge in the course of development of the economy of a backward region. Hence, a thematic and analytical approach has been adopted.

It is our pleasant duty to express our thanks to the many individuals who provided guidance, encouragement and help at various stages of the study. Our first and foremost thanks are due to Prof. T.S. Papola, former Director, Giri Institute of Development Studies, Lucknow and presently Advisor, Planning Commission, Government of India. It was Prof. Papola, who first conceived and initiated the present study. Even after moving the Planning Commission Prof. Papola kept his keen interest in the study and provided valuable guidance and encouragement till the completion of the present study.

We would also like to thank Prof. B.K. Joshi, Director, Giri Institute of Development Studies, Lucknow for providing all facilities required for the completion of the study. Our special thanks are due to Prof. A.K. Singh, who went through the unrevised version of the present report and provided invaluable comments and suggestions for improving the coverage and presentation of the study.

(iii)

Our grateful thanks are due to various persons who had been associated with this study at one stage or the other. The initial preparatory work of the study was done under the supervision of Shri R.C. Sinha and Dr. Bhanwar Singh, who were earlier on the faculty of the GIDS. The difficult work of collecting materials and preparing abstracts from various published and unpublished sources was done efficiently by Miss. Kalpana Pandey, Shri.R.C. Tyagi, Shri. B.K. Srivastava, Shri. Ashok Pandey, Shri. N.K. Bajpai and Miss. Savita Goel, who were associated at different stages of the study.

received
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CHAPTER I

INTRODUCTION

During the past few decades, several research studies in various states were sponsored, which aimed to put together the different research materials published or unpublished and completed or in progress in different universities and research organisations. This was necessary because policy makers and researchers encountered enormous difficulties on account of lack of knowledge about the relevant information and the literature. Such attempts as had been made in Gujarat, Kerala, Tamil Nadu and other states proved quite useful and rewarding.

In the state of Uttar Pradesh also producers as well as users of the research output have felt a great need for a stock-taking and coordination of research work completed or in progress at various universities, institutions and government departments. It has been increasingly realised

that while a large number of institutions in the state are engaged in research activities and a substantial volume of research output has been produced, there is no mechanism through which information on the research studies undertaken by one institution becomes known to others, as a large part of research work does not get published. Further, even if such information becomes available to some extent, there is no arrangement for its classification and analysis so as to make it readily usable to the research workers and policy makers. Obviously, there is an urgent need for establishing a regular mechanism through which the research outputs available from different institutions are put at one place which may lead to its effective utilization. This may even help to overcome the various problems arising on account of unnecessary duplication that takes place due to lack of required information base.

As a first step, it has been proposed to undertake a survey of research on the development of Uttar Pradesh. The coverage of such survey would be primarily confined to the research studies on development of U.P. Specifically, the study is proposed to cover broadly the various aspects of development on agriculture and industry, unorganised sector and urban development and infrastructure. It may be mentioned that, besides published studies, such as, books, reports, articles in Journals etc., we have also covered unpublished

materials in the form of doctoral theses, project reports and monographs from various research institutions and government departments. In the course of discussion, we have also indicated the major gaps in the existing knowledge in the subject and also the lines for further research. We, however, do not claim that we have covered all the published and unpublished materials, but we do hope that not much is missed in terms of research ideas.

CHAPTER II

AGRICULTURE

II.1 Introduction

Agriculture plays an important role in the development of Uttar Pradesh. Being the single largest sector, it employs three-fourths of state's workforce and generates over half of the state's gross domestic product (39, p.1; 110, p.244). The performance of U.P. agriculture has also been found above the average performance of the national economy (23, p.41). Besides, "it provides not only food and raw materials but also... earns valuable foreign exchange, increased income of agriculture also enhances market demand for industrial consumption goods thereby providing stimulus to industrialisation and expansion of tertiary sector" (169, p.1). It stands to reason that the pace of development is likely to be stimulated and influenced to a large extent, by the development of agriculture. It would be, therefore, worthwhile to discuss growth performance of agriculture.

II. 2 Agricultural Growth : Regional and Crop Differentials.

Generally, methodology used to examine the development of agriculture is heterogeneous in character which lacks the precise empirical quantifiability. The question that has basically been posed is what is an appropriate indicator of agricultural development ? Is it growth in agricultural output, or increase in average yield ?

Singh (141, pp.85-93), Anand (9), Pandit (102), Shukla (140), Tyagi (183) and Bhalla (20), using one or more indicators, painted out a mixed picture for agricultural growth both for the state as a whole as well as for different crops. Studies generally underlined the better growth performance of non-food crops than the food crops over the period 1950-51 to 1978-79.¹ However, situation was entirely different if the whole period was disaggregated into two sub-periods viz., (a) pre-green revolution period and

1. Over the period 1950-51 to 1978-79, output of foodgrains increased by 2.11 per cent and of cereals by 2.84 per cent per annum and that of oilseeds and sugarcane by 3.50 per cent per annum. Rates of growth of average yields, were however different for different agricultural crops; it was higher in wheat, rice and sugarcane, moderate in bajara, barley and pulses and nominal in jowar, maize and oilseeds. Similarly, area under the major crops witnessed a marked increase over the years (See, A.K. Singh, op.cit., 141).

(b) post-green revolution period. It was found that growth performance of agriculture was more impressive in second phase both for total as well as for different crops than in first phase.²

Pramod Chandra (27) in his study covering the period 1950-51 to 1980-81 has found that wheat and rice have emerged as most important crops in the state, covering over 53 per cent of the gross cropped area in the state in 1980-81. In 1951-52, these two crops had accounted for little over 34 per cent of the cropped area.

Growth performance of agriculture has also been examined by many scholars at the regional, district and block levels. Studies (142, 150) showed that agricultural output per acre was not only higher in the North-West U.P. than in the East U.P. Plains but also inter-regional

2. During 1950-51 to 1964-65 and 1964-65 to 1970-73, growth rates of output and productivity for foodgrains were higher in the second phase (2.51 per cent and 1.51 per cent) than in the first phase (1.51 per cent and 0.83 per cent). During the first phase, growth rate of rice output was rapid among the foodgrain crops and that of oilseeds and sugarcane among the non-food crops. During the second phase, output of wheat and rice increased sharply whereas that of cereals and pulses declined. The area increased in the case of wheat and pulses, jowar and barley in the second phase than in the first, whereas, it declined for many crops. Further, rate of growth of average yield for all items, except maize among foodgrains and sugarcane and oilseeds among non-food grains, was higher in the first phase than in the second phase (see, A.K. Singh, Ibid, 141).

differences widened over the years.³ Growth of agriculture was also different during the two sub-periods between the two regions. During pre-green revolution, foodgrains output increased at a faster rate in East U.P. (1.94 per cent per annum) than in West U.P. (1.26 per cent).

During the post-green revolution period, structure of agriculture transformed drastically, which placed West U.P. in an advantagenous position as compared to East U.P. Rate of growth of foodgrains output in West U.P. (4.16 per cent per annum) exceeded that of East U.P. (1.86 per cent per annum). However, a mixed picture emerged in terms of rate of growth of non-food crops.⁴

Rate of growth of output, total as well as for per hectare,⁵ showed a marked variations, West U.P. showing better performance leading to clear regional shifts and showing increasing inter-regional disparities (141, 144, 30). This

3. In North-West U.P., agricultural productivity was Rs. 471 during 1970-71 at 1950-51 prices, which was higher as compared to the East U.P. Plains (Rs. 348 per annum). Also, 'per acre value of output in West U.P. was higher by 13 per cent as compared to that in East U.P. in 1950-51, but difference increased to 23 per cent in 1960-61 and further to 31 per cent in 1970-71.' (A.K. Singh, op.cit., 142, pp.127-128).

4. Sugarcane output during 1950-51 to 1978-79 showed the higher compound growth rate (3.95 per cent per annum) in West U.P., than in the East U.P. which grew by the rate of 2.82 per cent per annum. Rate of growth of oilseeds output was also higher in west U.P. (4.53 per cent per annum) than in the East U.P. (1.28 per cent) (see A.K. Singh, op.cit., 141, pp.111-112).

5. "The coefficient of variation in the value of agricultural output per hectare increased from 20.1 per cent in 1950-53 to 30.7 per cent in 1963-66 and further to 35.5 per cent in 1977-79" (see A.K. Singh, op.cit., 141, p.125).

- was also reflected in the agricultural growth at the district levels. Four districts of West U.P., viz., Muzaffarnagar, Meerut, Bijnore and Saharanpur were the most developed, whereas four districts of Bundelkhand and Mirzapur in East U.P. were agriculturally the least developed districts. Further, districts of Sultanpur, Pratapgarh and Allahabad in South-East U.P. and those of Bahraich and Basti in North-East U.P. form two contiguous tracts of relatively low agricultural productivity. (141, pp. 125-130).

Various studies have also been undertaken to explain the inter-regional, inter-district and inter-block disparities of agricultural growth. These, for analytical convenience, are divided into three inter-related categories, viz., (i) those that emphasised lack of adequate irrigation, roads, electrification and slow adoption of new seeds and fertilizers; (ii) those that dealt with the non-availability of finance; and (iii) those that focussed upon the non-economic factors. Studies under the first category include those carried out by Charles Clift (28), Dhawan (29), Pandey, et.al. (99), Thakur (174), Azad, et.al. (6), Moorti, et.al. (89), Yadav, et.al. (190), Pant (104), Ali et.al. (7), Bhati (21), Sharma (136), Govinda Samy et.al. (40) and Yadav et.al. (189). These tend to explain how the various factors such as availability of irrigation, fertilizer and electricity facilities are important in

causing the agricultural productivity differentials. Although, the role of each factor was different in relation to different crops, spaces and points of time, but these taken together contributed to a great extent, in explaining the growth differential of agriculture and its productivity. Besides, these studies also touched upon some other important aspects. First, farms that used modern technology and inputs generated profits at a large scale than those which used traditional technology and inputs. Second, increased use of modern technology, to a large extent, resulted in the displacement of human labour. Third, cost of production was higher for farm using modern technology than those using traditional input and technology. Fourth, private tubewells, as a means of irrigation, were found more effective than the state owned tubewells. Fifth, operation of tubewells generally enjoyed the internal economies of scale but simultaneously it also created the external diseconomies by lowering down the surface water level.

Studies under the second category undertaken by Charles Clift (28, p.12), Singh (153), Bajpai (16), Srivastava (165) and Bhati, et.al (22) explained the growth differential of agriculture and its productivity in relation to regions, districts and blocks, on account of differential availability of finance. Such studies inter-alia also looked into three principal aspects. First, vegetable growers, for want of

funds, were compelled to rent out a part of their unirrigated land to other farmers for effective utilization. Second, availability of finance generally stimulated the cropping intensity through installation of pump-sets and tube-wells which enhanced the income of farmers. And third, a positive relationship was established between the financial resources and agricultural productivity.

Studies under the third category were those undertaken by Subas (167, 168), Guri Datt (41), Misra, et.al. (82), Misra (87) and Singh(112,112,149,153), which emphasized the caste, economic, political, climatic or cultural factors as determinants of agricultural growth and its productivity differentials. It is argued that upper caste farmers, on account of their resourcefulness, have control over qualitative inputs like fertilizers and irrigation which have ultimately led to an increase in output quantitatively as well as qualitatively. The argument thus established the positive relationship between the caste factor (82), and size of holding/^{with} the level of productivity. Besides, a set of quantifiable and non-quantifiable factors have also been mentioned to explain the productivity differentials. It is held, for instance, that "natural demographic and tenurial factors like floods and droughts, size and distribution of land holdings, land - man ratio, pattern of land ownership, etc. though they play a part, do not seem

to be major factors in causing productivity differentials. These are largely to be found in the relative underdevelopment of certain activating factors in East U.P. including among other things factors like credit and marketing, institutions and means of assured water supply, lack of sufficient capital stock etc. Differences in social customs, attitudes and quality of the cultivators are also responsible to a certain extent in causing productivity differentials in agriculture in two regions, but their impact is difficult to assess" (142, pp.145-146).

III.3 Allocation Efficiency

The issue how the utilisation of irrigation and the existing level of tenancy affect the growth of agriculture have also been discussed at length. Available evidence suggests that under utilisation of tube-wells which has been at the higher side has generated the huge deficit in the public exchequer (134). However, small and marginal farmers, on account of various reasons, have utilised tube-wells more intensively than the large farmers. In order that under utilisation of tube-wells could be checked, a more equal distribution of irrigation system was suggested the benefit of which might percolate down to the needy farmers (154).

II.4 Land Reforms and Tenancy

The increasing tenancy played a significant role in transfer of land, land holdings and appropriation of agricultural surpluses. The study by Joshi and Dhar (54) revealed that land transfer was a problem in all sections of rural society. Generally, it was the small and medium farmers who transferred their land either wholly or partly to the rich landlords. However, this had a little or no impact on overall land distribution system in the state. Indeed it was Zamindari Abolition which affected the size of land holdings and the sub-letting of land. Studies by Singh et.al. (146), Singh (141), Sanyal (128) found that leasing out of land declined considerably after the enforcement of Zamindari Abolition act. Similarly, Bardhan and Rudra (19) underlined that tenancy in East U.P. declined mainly on account of tenancy legislation act. Land holdings declined sharply in the case of upper Hindu castes, whereas it increased in the case of scheduled caste and scheduled tribe communities.⁶

6. Over the period 1953-54 to 1961-62, the leasing out of land practice declined, whereas, it increased from 1961-62 to 1971-72. "Over the period, the extent of leasing out of land has sharply increased in the case of holdings below 2.5 acres. Holdings between 2.5 and 15.0 acres also show some increase in leasing out operations, while holdings above this size generally show a decline in leasing out. These changes suggest that farmers in larger size groups now find it more profitable to cultivate their land themselves and are leasing out land less frequently. On the other hand, a large number of marginal and small farmers are also constrained to let out their land and look for other sources of earnings" (s.c A.K. Singh, op.cit., 141, p.247).

The class conflict between landlords and landless farmers was the outcome of century old agrarian structure. The study by Mishra et.al. broughtout this point very clearly. It was held that "the agrarian structure in Avadh was composed of Taluqdars, village Zamindars, peasants, tenants and agricultural labourers The materialisation of land as private property and the consolidation of Taluqdari rights in land and other intermediaries by the English were in the order of setting such an agrarian structure in Avadh that could easily succeed in superimposing colonial rule over the state at the base of feudal relations in land with a view to encompassing the whole countryside under British Raj from remote controls..... The actual tillers of the land were by and large peasants and tenants who constituted a major part of the population in Avadh. They were completely dependent on the feudal lords and their surpluses were appropriated by the lords, having no incentive to produce more than required which was again wholly dependent on nature in the absence of any techno-economic security to cultivation. In fact, they were placed under the double yoke of exploitation, i.e., the Zamindars, Taluqdars on the one hand and the state on the other". (83, pp.45-53).

Similarly, Joshi (61), Rawat (125), Singh (159),
and
Singh et.al. (146), Singh (155), Agrawal (5) / Shrimali (139)
explored how the landless and the marginal and small farmers

were exploited by rich-landlords and policies adopted by the government. During the pre-independence period, the agrarian structure of the state was governed wholly by the vested interests of Britishers who looked after the development of their own country rather than the development of Indian territory. Besides, role of rich landlords was also held equally important for the exploitation of landless peasants. During the post independence era, the agricultural structure was dominated by the rich-landlords by various ways. Rich landlords "together constituted the dominant power group in rural life. They could with the help of their power and position in rural life use the police and bureaucracy to subserve their own interests. They succeed in grabbing and/or retaining in reserve for themselves all the available surplus and separable land. The vast developmental resources- seed, fertilizer, credit, irrigation facilities, new technology poured into the rural sector could also be grabbed by them. They therefore became richer and still more powerful. The less favourably placed, the middle and smaller peasants; who constitute the bulk of rural people, had to compete with them under unfavourable conditions and hence lost in the land grabbing game, as well as failed to derive proportionate benefit from the developmental resources made available to the rural sector by the government" (139, p.395). This was

further supplemented by the fact that policies of big industrial and commercial monopolies were such that extracted the large amount of surpluses generated in the agriculture, which ultimately, as a result of poor bargaining capacity, forced poor peasants to sell their produce at abnormally low prices and simultaneously purchase their requirements at higher prices. This generated the tensions, movements and struggles among the peasants.⁷ Clearly therefore, surplus generated by agricultural sector was not distributed appropriately among the important facets. Whereas, talukdars and zamindars have extracted major fraction of surpluses, the other important factors are by no means less important. In view of this, we may now move to discuss the extent to which poor and inadequate marketing has lowered down the level of income of the farmers generated in the agricultural sector.

II. 5 Marketable Surplus and Marketing

Various studies (10, 32, 33, 65, 142 and 145) examined the marketable and marketed surplus and factors that inhibited its growth performance. Fahimuddin (32, 33) found that benefits from agricultural development have flown to larger farmers, whereas, small and marginal farmers were put at a highly disadvantageous

7. Study consists of a sample of 486 households of 15 districts of the state of Uttar Pradesh in 1976.

position. This was because small and marginal farmers sold their produce through traditional marketing agents in the village markets, which generally fetched lower prices. Associated with this was also the other several factors like, indebtedness, lack of transport facility, lack of information about price prevailing outside of village markets, smaller quantity of marketed surplus and so on. Further, the proportion of marketed surplus of the marketable surplus was found as high as 80.73 per cent in cereals, 86.61 per cent in pulses and 81.06 per cent in total foodgrains, implying thereby the higher level of marketability. However, this was again affected considerably by the role played by the brokers, commission agents and wholesaler-cum-commission agents. It is depressing that during 1975-76 to 1985-86, share of margins of wholesalers and retailers has been much higher than the marketing cost of the foodgrains (34). The study by Mishra, et.al. (85), thus, concludes that "(a) a significant portion of grain does not arrive in the mandies; (b) there are many producers who sell their grain surplus to the village traders not insignificantly in proportion; (c) the traders who extract a large amount of grain from the producers have upper hand in the regulated markets; (d) the marketing of grain by the farmers has least concern with the maximisation of gains from their sale; (e) other things remaining constant the

market arrivals of grains depend on the generation of marketable surplus by the farmers; and (f) there works a retrogressive process of exchange due to the under-development of muted formation of capitalist market and production relations in agriculture" (85, p.130).

Attempts were also made to explain the behaviour of marketable surplus with respect to demand and the size of land holdings. It was shown empirically that demand of agricultural produce relating to small and marginal farmers was stimulated by per capita income of consumers, whereas opposite relationship was established in the case of the large sized cultivators. It implied the substitution possibilities in favour of superior agricultural produce (17). On the other hand, the lower price was found encouraging the demand of agricultural produce (99).

Losses in foodgrains were stressed by S.C. Jain, et.al. (49) on account of storage facility. It was found that as compared with the private storage, losses were high if foodgrains were stored in warehouses. Also, losses kept on rising with the increase of waiting period in storage. Problem of marketing has, however, been entirely different in respect of non-foodgrains. Singh et.al. (146) and Kumar (66) historically looked at the effect of price changes on production. It was attributed primarily on account of the fact that prices prevailing in

villages and market centres were well known to cultivators.

Empirically it was shown that during 1951-52 to 1966-67, an increase in production was found associated positively with an increase in price.⁸

II.6 Employment and Wages

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The question as to how far the agricultural sector has been able to generate employment attracted the attention of agricultural economists (86). Conflicting results are reported by scholars. For some, employment grew in the agricultural sector, whereas for others it declined over the years. Studies by Raghuvansi et.al. (121) and Singh et.al. (147) underlined that employment increased due mainly to the increased use of fertilizer, irrigation, threshing⁹, increased capacity of plants, output - labour ratio and price elasticity¹⁰ of demand. Conversely, studies by

8. Short-run elasticity of production of sugarcane with price variable was found to be 0.2019 for Muzaffarnagar, 0.2747 for Saharanpur and 0.2603 for the U.P. State as a whole. Long-run elasticity was 0.4460 for Meerut, 0.9590 for Saharanpur and 0.7525 for the U.P. state (see Chandresh Kumar, (66) Ibid.)

9. During 1972-73 to 1980 employment of male workers increased, but for female workers it declined (see Daulat, Singh, et.al., 147).

10. C.S. Raghuvanshi showed that between 1970 and 1980, labour employment increased in sugarcane. (see op.cit., 121).

Vineeta (135), Parikh (119), Laxminarayan (71) demonstrated that employment in the agricultural sector declined over the years.¹¹ The reason underlying under such a phenomenon were stated to be the exploitation of landless by landlords (135), low level of demand for workers (119), casual status of worker (101) and seasonal factor (8).

The questions of variation in wage levels, supply of labour and its determinants have also been discussed at length, Mishra, (87), Joshi, (61,62), Nayyar (92). Study by Nayyar (92) emphasised that real wages increased in agricultural sector of the state on account of the impact of green revolution.¹² Papola and Mishra (105) and Mishra (88) found that supply of female workers was determined primarily by the institutional factors, whereas, their participation rate is determined by the household income levels and the wage rate. However, it was underlined that a high level of productivity could not ensure a rise in wage rates on account of given labour supply conditions. Technological transformation in agriculture is also stated to be no solution to the problem.

Study by Mishra (84) has underscored this fact "that there

11. Shankar, Vineeta as back as 1958-59 concluded that wide spread mechanisation of agriculture resulted in the displacement of labour and as a result workers migrated from rural to urban areas (see Shankar Vinceta, op.cit., 135); A. Parikh, in 1968-69 found that mechanisation in agriculture resulted into a decline of employment in Muzaffarnagar district of West U.P. (see A. Parikh, op.cit., 119); Laxminarayan concluded that permanent workers declined in Purana Pandey block of Basti district in U.P. during 1958-59 to 1972-73 (see H. Laxminarayan, op.cit., 71).

12. During 1956-57 to 1970-71, the increase in real wages was 0.9 per cent in West U.P. and 0.6 per cent in Central U.P., but in Eastern U.P. it was 2.3 per cent per annum (see Rohini Nayyar, op.cit., 92).

is no simple causal relationship between technological change and agricultural wages; and the supply-demand theory of wage determination may not explain the situation. There seems to be rather other forces at work in thwarting the materialisation of the positive wage-effects of technological change, despite the considerable agricultural growth in the state" (84, p.318). This was refuted by V.K. Pandey, et.al. (101) who showed that per farm surplus labour was lowest in western U.P., whereas, highest in Bundelkhand region.

II.7 Agricultural Taxation

The question as to whether agricultural sector had the capacity to bear the taxes or not was also highlighted by a few studies. Hemlata Rao (123) stressed that tax burden was relatively less on agricultural sector. Over the period, 1960-61 to 1965-66, direct taxes per capita from agricultural sector increased by 4 times, whereas, in the case of non-agricultural sector it increased by 6 times. Interestingly, whereas 85 per cent of village population paid 51 per cent direct taxes, 15 per cent of urban population paid 49 per cent of such taxes in the state. Moreover, tax paying capacity varied for different farm categories. Households with 5 acres of land were not found having tax paying capacity but households with 5-10 acres of land had the tax paying capacity of 2.3 per cent. Households with

10-15 and 15-20 acres of land were found having tax paying capacity of 24 and 21 per cent respectively. Subsequently, households with over 20 acres of land were seen possessing tax paying capacity of 51 per cent (31). It was suggested, therefore, that marginal and small farmers should be exempted from the direct taxes, whereas, it should be imposed on the income of the rich landlords. The study by Sarin (129) showed that the burden of taxation is rather heavy on lower and middle income groups in rural areas. It is pointed out that "taxes taken at the level of 1948-49 vary from about 4 per cent to 36.8 per cent or more if the incomes are above Rs. 50,000 out of individual incomes from non-agricultural sources. The corresponding range for the year 1938-39 was 1.2 per cent to 20.5 per cent. With regard to agricultural and rural incomes, the range varies from 6.7 per cent to 31 per cent in 1948-49 and from 3.4 per cent to 29 per cent in 1938-39" (Sarin, 129, p. 64).

II.8 Developmental Programmes

India's economic development was initiated in a planned way since the First Plan and the developmental activities speeded up effectively since the Second Plan onwards. Till the Third Five Year Plan, the objective was to attain the maximum possible growth rate through the process of industrialization. It was implicitly assumed that higher

rate of growth might lead to the redistribution of income, which would help to solving the problems of poverty, unemployment and inequality. However, expected achievements did not follow and the gap between rich and poor widened. Since Fifth Plan emphasis shifted towards the improvement in the living conditions of rural communities. The basic emphasis of the various developmental programmes was to provide employment and to generate income for the rural masses. This was thought appropriate by speeding up of the agricultural sector of the state economy. In this particular section we confine ourselves to critically evaluate the performance of various developmental programmes. These studies, in view of analytical convenience, may be classified into three inter-related categories: (i) studies that underline the increase of income of beneficiary farmers on account of implementation of developmental programmes; (ii) studies that examine the role of various banks and institutional agencies in initiating such programmes; and (iii) studies that look closely into the operational deficiency of various programmes and the associated factors.

Under the first category, studies by Singh et.al. (151), Rahim et.al. (122) and Agrawal (4), examined the impact of Ram Ganga Command Area Development Project and the quantum of subsidies given in raising the agricultural

productivity accompanied with cropping intensity and irrigation facility.¹³ Overtime, various scholars examined the impact of various developmental programmes in raising the income of the farmers in various districts, blocks and villages of the state. For instance, Yadav et.al. (190), Singh et.al., (156), Upadhyay et.al. (185), Singh et.al. (152), Pandey et.al. (100) and Adhikari (1) examined the impact of subsidies under Marginal Farmers and Agricultural Labourers (MFAL), Intensive Agricultural District Programme (IADP), Small Farmers Development Programme (SFDP) and Integrated Rural Development Programme (IRDP) in raising the income of farmers. These studies, by and large, indicate that the income of the beneficiary cultivators increased

13. During 1973-74 to 1975-76, irrigated area in U.P. increased from 52.86 per cent to 56.53 per cent; cropping intensity from 133.85 per cent to 135 per cent and per hectare yield of foodgrains from 9.13 quintals to 10.69 quintals (see, R.I. Singh, et.al. (151), op.cit., (152), Rahim et.al examined the impact of subsidy under the Improved Terracing Programme. Based on a sample of 90 respondents of hill regions, he found that cost-benefit ratio improved primarily on account of increased irrigation facility. This justified the subsidy given to farmers of hill areas during the period (see, Rahim et.al. op.cit., 122); Agrawal found that Intensive Agricultural District Programme (IADP) in 196 villages of district Aligarh was less successful. This was mainly due to the institutional factors like tenancy reforms, ceilings on land holdings and consolidation of land (see Agrawal, op.cit., (4).

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over the years in comparison to non-beneficiary farmers.

We may now dwell upon the studies under second category. It may be mentioned that banks have played a crucial role under different developmental programmes in extending the credit to the farmers. Balishter et.al. (18) and Singh (153) examined inter-alia the role played by the banks as a supplier of credits to the farmers and the problems surmounted in repayment of loan. It was concluded that whereas 78 per cent of beneficiaries borrowed from banks and institutional agencies, only 22 per cent of beneficiaries

14. In 1980-81, Yadav, et.al. (190) found that in Ajitmal block of Etawah district, the average income of 30 beneficiaries which received subsidy, was higher than the same number of non-beneficiary farmers (see Yadav et.al. op.cit. 190); Singh et.al. in 1981-82, studied the impact of subsidy on changes in intensity of resource use and investment for 25 beneficiaries vis-a-vis the same number of non-beneficiary cultivators. It was found that capital investment, gross and net income and business income were far higher for beneficiary cultivators than the non-beneficiary ones. (see, Singh et.al., op.cit., 156); Upadhyay et.al. taking a sample from two blocks and 7 villages in Rasara Tehsil of Ballia district, examined the impact of MFAL on changes in fixed assets, employment opportunities and farm business income of selected farmers. It was seen that such programmes had positive impact on raising the fixed assets and employment opportunities (see, Upadhyay, et.al. op.cit., 185); Singh, et.al. evaluated the impact of IADP over 1966-67 to 1970-71. For this purpose, a sample of 140 cultivators across the different size of land holdings of the Dhanipur block of Aligarh district was considered (see Singh et.al. op.cit., 152); Pandey et.al. examined the impact of Small Farmers Development Agency Programme (SFDA) see Pandey et.al., op.cit. 100); Adhikari, in 1981, evaluated the impact of IRD Programme for 600 families in backward block of Kumaun Hills (see Adhikari, op.cit., 1).

took loan from the non-institutional sources. Notwithstanding, a distinct discriminatory policy followed, small and marginal farmers were given much less loan than the large and medium farmers. As far as repayment of loan is concerned, Land Development Bank felt more satisfied than the Cooperative Societies and Commercial Banks.¹⁵

Under the third category, studies showed that various developmental programmes have been ineffective in solving the problems of poverty and unemployment on account of various deficiencies. Papola and Tewari (106) demonstrated various deficiencies in the implementation of the RIEGP. It was stressed that RIEGP scheme, which was exclusively meant for landless households also included 56 per cent of land owner households. Thus the fundamental objective of the scheme which proposed to cover only landless and unemployed beneficiaries was defeated. The study also reported the noncooperation by the government officials. Block level officials who were supposed to play a key role in identification of beneficiaries were found almost ineffective. Also, beneficiaries covered under the scheme were not seen

15. The study by Balishter *et.al.* relates to the year 1983-84, which considers 74 farmers from the 6 villages of Chaumuhan block of Mathura district. (see Balishter, *et.al.* *op.cit.*, 18); R.K. Singh, during 1979-80 to 1980-81 considered 25 farmers of Agra district of the state (see R.K. Singh, *op.cit.* 153).

satisfied fully with respect of the mode of payment. A study by Pant (103) emphasised the need for new type of employment generating scheme as existing Antodaya Programme was not able to generate enough employment on account of its implementation deficiencies.¹⁶ Jafri et.al (43) lamented on the poor performance of the package of rural developmental programmes in U.P. Hills. Various programmes like IRDP, NREP, RLEGP were not found performing satisfactorily for several reasons. The failure of IRDP was held mainly due to inappropriate criterion of selection of beneficiaries, little or no knowledge about the schemes by beneficiaries and above all noncooperative attitudes by the bank officials. Similarly for RLEGP, it was emphasised that authorities encouraged development of animal husbandry without taking into account the local skills and other factor endowment structure.¹⁷

16. Study considered 250 households from 43 villages of Allahabad and 51 villages from Fatehpur district of the state (see A.D. Pant, 103).

17. Study in 1980-81, considered a sample of 197 beneficiaries under RLEGP and 11 beneficiaries under special component plan (SCP). Such beneficiaries were drawn from 850 households from 83 sampled villages of 14 sampled blocks of 8 districts of U.P. Hills (see Jafri, et.al., op.cit., 43).

Studies by Giri Institute (37, 38) examined the impact of Integrated Area Development Programme (IADP) in context of overall development of the blocks. It was observed that such a programme was primarily based on the availability of natural endowment, resource potential, organisation and institutional structures, existing levels of development and requirement of local population. It was concluded that agricultural productivity could be enhanced by increasing the area under cultivation, irrigation facility, fertilizers use, etc.¹⁸

II.9 Miscellaneous Studies

Joshi (55) questioned seriously the definition of development as distinct from underdevelopment. He argued that if per capita income would be taken as aggregate economic development indicator, the hill region could be placed as a most developed region of the state. However,

18. Study considered 5 blocks of Panwari, Mahobakanth, Bendo, Taiya and Alipura (Giri Institute of Development Studies, op.cit., 37). The Giri Institute of Development Studies also examined as to how the employment could be generated for the Babina district (see GIDS, op.cit., 38).

if one takes other developmental indicators, the same region may fall in the category of underdeveloped region. Thus, a paradoxical situation arises. To support his argument, he has pointed out that Nainital and Dehra Dun which consist of a fairly large proportion of plain area can be termed as developed region. As compared to this, rest of the Hill regions, which account for fairly large proportion of forest products, can be treated as underdeveloped regions. To supplement this, Chandra et.al. (26) showed that area under forest increased in U.P. during 1950-51 to 1980-81 but rate of growth was slower in Hill region than the rest. During 1979-80, Hill region accounted for about 60 per cent of area under forest. Generally, a significant proportion of forest area in U.P. are under khair, sisoo and misc. spices followed by bamboo tree. Thus share of land under foodgrain crops is relatively low. Goswami (36) has, therefore, rightly pointed out that the prime cause of underdevelopment is the dominance of non-food crops, which has primarily led to the increase of dismal poverty in the Hills.

II.10 New Directions

We may now briefly point out the principal focal points of the earlier sections. Studies per-se, demonstrated the higher growth performance of agriculture during the post-green revolution period as compared to the pre-green

revolution period. This is specifically true for non-food crops in general and certain specific food crops notably wheat and rice in particular. This agricultural performance generated the problem of inter-regional disparities. Generally Eastern U.P. lagged behind Western U.P. Such an unbalanced agricultural development has been seemingly explained by various important factors, which inter-alia include, uneven distribution of irrigation, fertilizer, technology, improved HYVs, finance, caste factor and so on. As such, this has been done on the basis of various heterogeneous indicators of agricultural development. Therefore, it would be useful to workout appropriately a composite index of agricultural development to identify the role of various explanatory factors.

Marketing of the agricultural produce also merits special mention. As discussed earlier, marketing of foodgrains, has wider implication on the appropriation of surpluses. Commission agents viz.: brokers, wholesalers, retailers, etc. have generally extracted the margins, which may have otherwise gone to the producers. It would be essential, therefore, to examine more precisely how the role of commission agents could be minimised. Various studies have also underlined that advance technology in agriculture has been of the capital intensive type, which

has displaced the human labour in the labour surplus economy. But at the same time, it has also induced larger output. Therefore, a conflicting problem has arisen as to whether our basic strategy is the maximisation of agricultural output or the generation of employment. This needs to be sorted out at a priority basis. A further research study is definitely needed to tackle this problem.

In passing reference, we may add that various developmental programmes have been undertaken to enhance the agricultural output. Unfortunately, studies seem to suggest that, owing to various problems, such as, lack of knowledge about the programmes, noncooperative attitude of the bank officials and inappropriate criterion of selection of beneficiaries at the grass root levels, the developmental programmes have not yielded the desired results. On the other hand, some studies do suggest that the various developmental programmes exerted a positive influence in raising the income of the beneficiaries. It may be extremely useful if further research studies are undertaken to re-examine the impact of various developmental programmes at district, block and village levels.

CHAPTER III

INDUSTRIAL DEVELOPMENT

III.1 Introduction

Industrial development received high importance since Second Plan onwards. Different states of the country achieved different levels of industrial development, which, in turn, was influenced by the infrastructure facilities and the policies pursued by the government and differences in factor endowments. This chapter looks into the various aspects of industrial development.

III.2 Industrial Development: State Level and Regional Level Analysis

The relative level of industrial development of Uttar Pradesh has been examined by different studies. Tiwari (175) showed that the relative level of industrial development of U.P. came down in 1971 as compared to 1961, which continued in 1981. The rank of U.P. in terms of industrial development which was 11th in 1961, reduced to 13 in 1971, and further slipped back to 15 in 1981. It was depressing that U.P. failed even to retain its

earlier position of 1961 and remained industrially least developed states after Jammu and Kashmir in 1981. Tewari (170), however, found that the level of industrial development of U.P. remained invariant between 1971 and 1981 with 11th rank. This may be attributed primarily due to the methodological differences especially the application of different developmental indicators used by these two studies.

Studies have focussed upon the level of industrial development between different regions of the state. Generally, West U.P. showed the best performance in terms of industrial development, whereas East U.P. the worst. Singh (142) in his study covering 1951-1975, stated that 'North-West U.P. has experienced a sustained growth of factory industry over the entire period. Number of factories has increased 5 times and number of factory workers 3.5 times in this region. On the other hand, the growth of factory industry was slowest in East U.P. tarai' (142, p.180). A recent study by Rakesh Kumar (67) more or less arrived at the same conclusion. He points out that level of industrial activity was above the state average in Western region followed by Central region, whereas, it was below the state average in Eastern, Bundelkhand and Hill region. He calculates location quotients for variables like workers, gross invested capital, output and value added. The location quotients are found comparatively lower in Eastern,

Bundelkhand and Hill region as compared to Western and Central region. The similar finding was also arrived by R.T. Tewari (171).

III.3 Industrial Transformation

Uttar Pradesh experienced industrial transformation during 1970s both at state as well as at the regional level. This is highlighted by some of the studies. Tiwari (175) underscored that whereas share of primary sector in total income of the state decreased from 60.2 per cent in 1960-61 to 44.90 per cent in 1982-83, share of secondary sector increased from 11 per cent to 19.5 per cent and that of tertiary sector from 28.7 per cent to 35.6 per cent. Since the above is based on a very aggregative level, an examination of change in industrial structure at the level of product break down is called for. Papola (110), Joshi (50), Kumar (67) and Adhikari (2) have revealed the industrial transformation at the level of disaggregation of commodities. During 1961 Joshi and Tyagi (50, 184) found that state was dominated by natural resource based industries like textiles and food in terms of number of units, whereas capital and intermediate goods industries were more

significant in terms of employment. During 1981, the situation remained, more or less, unchanged, whereas consumer goods continued as an important industrial category in terms of number of units, the natural resource based industries continued to enjoy advantage in terms of employment. It was rightly held that "the most important industry group in the state has been the food products group. Other important industry groups to register a relatively fast rate of growth have been paper and paper products, chemicals, non-metallic mineral products, etc. The industry groups such as chemicals, non-metallic mineral products and basic metals and alloys have a recent origin but have emerged as significant" (50, p. 212).

This was supported by the study of Adhikari (2), who examined industrial development in terms of capital, employment, output and value added. During 1961, consumer goods industries like textiles and sugar accounted for over 75 per cent of share in terms of capital, employment, output and value added. However, during 1971, structural transformation took place which underlined the sharp decline in resource based traditional industries, whereas a moderate increase in capital goods industries. Various new industry groups, such as, basic metals and alloys, rubber, chemicals and metals replaced the traditional manufacturing industries. By 1981, sophisticated industrial products

such as, electrical machinery, machinery, transport equipment and chemicals become vitally important compared to the 1970s. During 1971-81, electrical machinery, machinery, rubber, plastics and petroleum improved their position considerably, whereas basic metals and alloys increased in terms of output and value added but registered down fall in terms of number of units and employment. Similarly, transport equipment, except in a number of units, witnessed downfall in various industrial developmental indicators. Electricity and power accounted for 50 per cent and 60 per cent in terms of productive capital, 8 per cent and 17 per cent in terms of share of employment and 12 per cent and 9 per cent share in terms of value added. Such a pattern of industrial development, i.e., transformation from consumer-goods-resource based industries to capital goods industries, is characterised by the classical pattern of industrial evolution (2). Various factors seem to have contributed to the industrial transformation of the state, such as, development of infrastructure, urbanisation (50) and the role of government policy (118) in terms of plan allocations for the industrial sector (175). Various studies have also been undertaken at the city and the regional level (173, 115). Singh (159), Prasad (120), Roy (126), Mukherjee (90), Sobhlok (127), Bose (25), Verma (187) and Vishwan (188) examined the various aspects at the city and at the regional level.

It was pointed out that scope for building up of heavy industrial complexes in the Kanpur city is largely inappropriate and uncondusive in accordance to the existing factor endowments. Therefore, development of agrobased industries should be given importance on the one hand and on the other such industries as chemicals and others should be developed in the large, medium and small sized towns. This would lead to the balanced industrial growth of the region.

III.4 Inter-Industry Linkages

Industrial development strategy envisaged in the Second Plan onwards has proposed to promote and strengthen the inter-industry linkages. This is primarily because such a strategy is likely to generate surpluses from one sector to another and also as a solution to the problem of unemployment through various demand and supply mechanisms. We may, therefore, discuss the inter-industry linkages in the state. Papola and Mathur (114) examined the inter-sectoral linkages for large, medium and small enterprises of metal engineering industry in Kanpur. Papola and Mathur (114) conclude that "(i) most of the enterprises in either sector function independently without having any regular market or technological relationship with enterprises in the other sector; (ii) market linkages in the form of sub-contracting arrangements are the central and predominant form of inter-relationship between the two sectors; (iii)

in majority of cases of inter-relationship, market linkages exist independently of any form of technological cooperation between the enterprises in two sectors; (iv) technological linkages are mostly accompanied with market linkages; they exist independently only in few cases. It may, however, be noted that the most important form of technological linkages consists of product specification and designs given along with supply order by large to small enterprises; and it is seen that the specifications given are too simple and general (e.g. size, type of material to be used, etc.) to involve any real transfer of technology" (114, p.15). The study further underlined that output and employment grew more in the case of linked enterprises than the non-linked enterprises. This was found true between the large and small sector enterprises as well as in the individual product groups.

A more recent study by Adhikari (2) also examined the state of backward as well as forward linkages at a more detailed level of product disaggregation. The study concludes that "from strong backward linkage point of view, non-electrical equipments was found to have strong linkages with iron and steel, metal products with non-ferrous metals, glass and glass products with miscellaneous chemicals and coal and coke; non-metal products with non-ferrus

metals, grain mills products with cereals and pulses, rubber products with other agricultural products and miscellaneous chemicals. Similarly, in terms of forward linkages also transport equipment had strong linkages with railway and motor transport, metal products with dairy products and canning and preservation, iron and steel with construction, electrical equipments, transport equipments, non-electrical equipments, metal products and non-metal products; non-ferrous metals with electrical equipments and metal products, miscellaneous chemicals, power, coal and coke and water supply had wide spread forward linkages in 1970-71" (2).

III.5 Inter-District Industrial Development

Balanced regional development approach assumes explicitly the development of backward areas. Conscious and deliberate attempts by the state government have also embarked upon these lines specifically since the Fifth Five Year Plan onwards. It, therefore, calls for a discussion the extent to which industrially least developed districts of the state have benefited by different industrial developmental programmes. Industrial development has been examined by various studies by Singh (159), Papola, (110), Papola and Fahimuddin (118), Tewari (171), Singh (142) and Joshi (50) mainly in terms of growth of number of factories, output and employment. Joshi (50) examined the inter-district industrial development during

the period, 1961-71, 1971-1980-81 and 1961 - 1980-81.¹⁹

In terms of employment growth, it was stressed that 'as many as 11 districts maintained a high growth during all three periods, while three districts were always in a low category' (50, pp. 221-222). Growth of output as an indicator of industrial development, however, presented a mixed pattern. Considerable variations were observed in the growth of output both in case of the backward and the non-backward districts. Also, whereas some districts performed fairly satisfactorily, others lagged behind in terms of output.

²⁰ Further, of the 37, 15 districts having larger share of food products were located in Muzaffarnagar, Meerut and Gorakhpur. Cotton textiles, machinery and machine

19. "The number of districts having employment growth above state average remained around 60 per cent. But there was a constant shifting of districts between high and low growth between one period to another. Consequently a district having higher than average growth between 1961-71 got relegated to the low category in the next period since its employment growth could not keep pace with the employment growth of the state" (see A. Joshi, Ibid., (50)).

20. It was held that "a district with high growth in say 1961-71 found itself in the low growth category in the next period. While there was no difference in the total number of districts which always had a high output growth... the number of districts always having a low output growth was found 14"....' (see, A. Joshi, Ibid., (50)).

tools units were located mainly in Meerut and Kanpur. Note may be taken that Kanpur alone accounted for about 68 per cent of employment in the cotton textile industry.

Such an uneven industrial development was explained by different factors at different points of time. In 1961, the industrial growth was mainly explained by availability of road transport, in 1971, banking facility was found important alone. In 1980-81, variables, such as, agricultural produce and area under cash crops were found important. This seems to suggest that districts having high level of agricultural development and infrastructure have also shown the higher level of industrial development. Such districts include : Saharanpur, Meerut, Muzaffarnagar, Ghaziabad, Kanpur, Allahabad and Varanasi.

III.6 Summary View

The foregoing section portrayed that Uttar Pradesh has failed to keep pace with other states of the country in terms of industrial development. Over time, its relative position as an industrial state has either declined or remained stagnant. This is explained by the industrial development indicators which have been heterogeneous in character. Since different regions of the state are endowed differently with different types of factor endowments, they are at different levels of industrial development. Generally, West

U.P. is seen at an advantageous position as the most industrially developed region, whereas, Eastern region and Bundelkhand have been the least industrially developed regions. Such an inter-regional industrial development variation is primarily explained by the location quotients and other factors. However, it still needs to be proved more rigorously as to what factors are responsible for such a pattern of industrial development. Is it because of climatic and soil differences, differences in availability of skilled personnel, agglomeration economies, internal economies of scale, availability of infrastructure, entrepreneurial attitudes and above all the policies pursued by the government in terms of subsidies or other facilities ? Of course, a fresh study is definitely required in a quantitative framework to examine the above problems.

The study has also underlined the industrial transformation in the state, which has followed the classical pattern of industrial evolution. Consumer goods industries, which dominated the industrial scene of the state during early 1960s seem to have been outstripped by the capital goods industries during 1980. This was explained by the infrastructural facilities and growth of agriculture. Generally, districts better endowed in terms of banking and infrastructure are seen industrially more developed than the other districts of the state. This, in fact, partly

demonstrates the higher linkages between the two sectors of agriculture and industry. However, linkages among the metal engineering industry does not fully corroborate this point. As has amply been demonstrated that most of the small, medium and large enterprises function independently without much of technological and market relationships. Since the analysis of such study only examines the first order effect, this needs to be extended over time and space which would further examine the direct and indirect interdependence at a greater level of product disaggregation.

CHAPTER IV

UNORGANISED SECTOR

IV.1 Introduction

Massive growth in urban population, especially in the metropolitan and large cities, raises many questions concerning unemployment, possibility of creating viable employment for the existing number of unemployed, under-employed and also to the future increase in the labour or workforce resulting from migration. The prospect of absorbing the growing city or urban population into productive occupations and providing them with the required social and other urban amenities, seems very slight, given current trends of employment growth in the organized industrial sector on the one hand and expenditure, investment and management capabilities of the civic authorities on the other. It seems that urban development strategy based on organised sector is not much viable on account of its limited capacity to create employment and to generate income and therefore unorganised sector development strategy would be more equitable and income and employment oriented.

IV.2 A Comparative View

The study by Tiwari (177) compared the performance of the informal sector vis-a-vis the formal sector.²¹ Growth of the informal sector measured by employment criterion, was found more spectacular than that of the formal sector during 1971-1986. Also, cost of providing employment as measured by capital - labour ratio and output - capital ratio was lower and therefore favourable to the informal than the formal sector. However, share of informal sector in terms of income and employment of the city was far lower than that of the formal sector. But the relative importance of the informal sector was substantial in non-manufacturing segment than the manufacturing segment of the city economy. Average productivity of the informal sector was lower than that of the formal sector in manufacturing segment, non-manufacturing segment and city's average. Production structure of the informal sector was characterised as labour intensive. This was borne out by the fact that labour cost per unit of output was higher in the informal sector than the formal sector. But non-wage cost was lower in the informal than the formal sector.

21. Study covers a sample of 1175 units, of which 150 are drawn from the formal and 1025 from the informal sector in 1985-86 from the Kanpur City (See Tiwari, Op.cit., 177).

Studies (176, 177, 179) further underlined the weak linkages between the informal and the formal sector firms. Trade emerged as of crucial importance, which supplied inputs both to the formal and the informal sector enterprises. As far as market linkages are concerned, they were weak or almost non-existent in the case of formal sector. A substantial proportion of output from this sector was sold to the various markets located outside the state. However, strong market linkages emerged in the case of the informal sector as a overwhelming proportion of output was sold to the local consumers. However, the linkages between formal and informal sector firms both for purchase of input and disposal of output and vice-versa were found generally less significant. The above analysis considered direct supply and purchase activities and excluded indirect effect of general interdependence. To capture this, analysis was extended further to examine the nature of city's general interdependence as well as direct and indirect linkage effects. By applying Leontief's inverse, the study underscored that industrialization strategy advocated by Hirschman would not yield the fruitful results. This happened because output inducement based upon backward linkages was likely to impair the other developmental objectives such as income and employment generation. Further, textiles, rubber and plastics

emerged to satisfy the 'key' sectors of the city economy based on various backward and forward multiplier matrices.

IV.3 Problems Faced by Unorganised Sector and Its Employees

Studies were also undertaken to examine the extent to which unorganised sector enterprises were exploited by variety of ways. Studies (108, 35, 109) revealed the discrimination against women vis-a-vis men in terms of payment of wages.²² Papola (109) observed discriminatory practices which existed in various establishments of Lucknow city.

For example, it was found that a woman candidate, on an average, had 25 per cent lower chance of getting employment as compared to a male candidate. Further, a female worker earned 20 per cent less than a male worker, irrespective of the nature of work performed. Worse than this was the fact that as much as 15 per cent of the above problems were generated due mainly to labour market discrimination.

Pande (94) similarly found that wages paid to a female worker in the unorganised sector was less by 17.36 per cent than paid to a male worker. Across different districts, wage differential was highest in Kanpur and lowest in Moradabad district. In different activities, wage differential was

22. "Women Workers in an Urban Labour Market : A Study of Segregation and Discrimination in Employment in Lucknow" also examined such aspects (See, Papola, 109).

highest in agriculture and construction activities.²³ It was pointed out that "the wage differentials between male and female workers varied from 11.95 per cent in agriculture sector to 3.15 per cent in industry sector. The wages of female workers was 20.63 per cent less than the wages of male workers employed in construction in district Kanpur. In district Nainital the female workers were getting wages 11.95 per cent less than the wages of male workers in agriculture sector. The wages of female workers employed in industry sector were 8.19 per cent and 4.59 per cent less than the wages of male workers in districts Kanpur and Moradabad respectively" (94, p.145).

Besides the problems of low wages and discrimination practices, the exploitative role played by the middleman has also cropped up quite sharply in some of the unorganised sector studies. Singh et.al (157) in 1975 brought out very clearly that carpet making industry²⁴ was exploited intensively

23. The study consists of a sample of 207 male and equal number of female workers employed in 42 organisations in three districts, viz., Kanpur, Moradabad and Nainital of U.P. state. The study relates to the year 1988-89 (See Pande, Op.cit., 94).

24. The study is based on a sample of 5833 artisans - 4024 from Bhadohi and 1739 from Mirzapur in 1975 (see Singh et.al. Op.cit., 157).

by the middleman. As much as 87 per cent of the trade was found dominated by the middlemen such as wholesale traders and contractors. Middlemen have not only narrowed down the margins but also affected the wages adversely. It is held that 'the average monthly earnings of the workers themselves are depressed, the average for all categories being only Rs.121. Contrary to expectations, there is no difference in the average monthly earnings of the wage employees and contract workers - it being Rs.121. However, as one moves to the category of workers who are relatively free from middlemen influences, the average monthly income rises; it is about Rs.174 for self-employed-cum-contract workers and Rs.300 for the self-employed (157, Ch.IV). The role of middlemen was also found extremely vital in the functioning of the handloom industry. It is indeed disappointing that right from giving employment for workers to the sale of products, whole salers, retailers, brokers and other intermediaries have played a rather exploitative role. Singh et.al. (158) found that 98 per cent of entrepreneurs had direct contract with middlemen both in terms of procuring raw materials as well as the sale of products.²⁵ As far as average earning of a worker is

25. The study is based on a sample of 2196 weavers at Mau in Azamgarh district of the U.P. State. The study relates to the year 1973 (see Singh et.al. Ibid, 158).

concerned, the position is, in fact, pitiable. It has been stated that 'the average monthly earning is only Rs.113 in 1973. It needs to be noted that the average monthly earning is highest for self-employed worker (about Rs.133), lower for the contract workers and the self-employed-cum-contract workers (about Rs.120 - Rs.122), and the lowest for the wage-employee (about Rs.107) (158, p.17-18).

Focuss has also been shifted towards examining the competitiveness of unorganised sector, living conditions of workers and relationship between the nature of establishments and the earning..Ashraf (11) argued that hand printing entrepreneurs²⁶ no longer felt threatened by the competitive ability of the organised sector entrepreneurs. However, living condition of workers was reported to be miserable. It was pointed out that "11.52 per cent of them were living in either fully kutch or partly kutch houses; 40 per cent had only a single room accommodation; about 62 per cent of houses did not have electricity; about 46 per cent had no running water; 50.3 per cent had no independent bath room and 47.2 per cent had no separate

26. The study consists a sample of 75 establishments of textile hand printing industry of Farrukhabad district of U.P. It relates to the year 1978-79. (Ashraf, Ibid, 11).

"toilet facilities" (11, p.85). The study, further, shows that earning rises with the size of units and vice-versa. Such industry primarily being household type tends to employ more number of family members. There is indeed a direct relationship between the earning of a household worker and household unit, of which worker is a part. Normally, household units are better pay masters than those units which employ hired workers from outside. It is held that "the annual earnings per household worker in an establishment where only job work is undertaken is about five times higher than the average earnings of a hired worker. The gap in income of the two types of workers widens very much in other types of establishments such as the household workers' average income was seventeen times higher in units which work for themselves as well as for others; sixty-four times higher in units which work for themselves and get their work done by others; and about-seventy-four times higher in establishments which work for themselves only" (11, pp.82-83). The same was the case with stone industry.

Ashraf (14) found that workers in stone industry of Agra²⁷ earned only Rs.153.96 per month, on an average. Earning

27. The study is based on a sample of 45 establishments and 180 workers of stone industry in Agra. The reference year of the study is 1981 (see Ashraf, Ibid, 14).

increased with the size of unit. A worker in Karkhana type unit earned as much as Rs.6415.92 per annum, which was higher than the worker engaged in own family units (Rs.5994.54) and small household units (Rs.5013.12) per annum. Similarly, living condition of workers was also found miserable. It was held that "two-thirds of workers families were residing in just one or two room with a covered area of 200 sq.ft. One-third of houses were without electricity; 43.33 per cent workers did not have running water; and 38.34 per cent of houses did not have a toilet in their premises" (14, p.99). Tiwari (177) also highlighted some of these problems. Informal sector in the Kanpur city employed 58.30 per cent of family members, 28.29 per cent of casual workers, 9.93 per cent of regular workers and 0.60 per cent of apprentice child labour. Formal sector, however, employed only 3 per cent of unpaid family workers. The wage for informal sector worker worked out at Rs.5894.75 per annum, which was lower by 66.45 per cent compared to that of formal sector worker of Rs.9811.96 in 1985-86.

The unorganised sector, in addition to above, are also seen facing several problems, which affected adversely their production and sale. Mehta (79) found that most of the household units in Hill villages experienced a set back primarily on account of inadequate availability of raw materials, obsolete technology and inferior quality of

products.²⁸ Such findings were also revealed by many researchers, such as Ashraf, (11), Singh, (158), Tiwari, (177) and many others.

IV.4 Role of Government Assistance for Development of Unorganised Sector

As discussed earlier, most of the unorganised sector units, faced various problems both on internal production as well as on marketing fronts. To overcome these, government embarked upon various assistance programme from time to time. Very often, various assistance programmes were initiated to enhance the level of industrial development of the backward regions. Priority in benefits has been given to units located in backward districts of the state. Joshi and Papola and Joshi (51, 52) have evaluated the impact of specific schemes²⁹ on the growth of units. Capital subsidy has been provided to these units to purchase the machinery & such

28. Study considers Jarti and Farsali Palli villages of U.P. Hills in 1984 (see Op.cit 79).

29. Study considered a sample of 213 units from six districts: 30 units from Bareilly, 25 from Bulandshahr, 25 from Dehradun, 48 from Moradabad, 38 from Muzaffarnagar and 47 from Saharanpur (see, Joshi and Papola, Op.cit., 51).

beneficiary units have experienced a higher rate of growth in terms of output and employment. Generating Set subsidy is primarily provided to overcome the problem of frequent interruptions of electricity supply by state electricity board. The study remarked: "In principle the state should subsidise the difference between the cost of generating power internally and the rate of power supply applied by the board, for the period of scheduled production during which the board is not able to supply the power, or then interest on the capital to purchase the generating set could be suitably subsidised" (51, pp.68-69). Such a subsidy was most commonly availed by various units of sugar/khandsari, electroplating and paper and paper products. Incentives like sales tax exemption, sales tax refund, sales tax deferment and free interest loan were also introduced. The objective of these incentives was to enhance the competitive strength in terms of marketability of the products for those units that incurred losses. Such incentives have been demanded extensively by most of the units surveyed. It was felt that "a single incentive from single source, with a substantial amount of benefit in the form of direct or indirect funds would probably attract and induce a larger number of entrepreneurs than multiple incentives administered by several agencies each providing a small amount of specific help" (51, p.73). It was suggested that the basis of giving

incentives, which was based on the classification of 'old' and 'new' units, should be modified. Incentives should be provided on the basis of 'new productive capacity' of the units.

Besides, the subsidies and incentives given to overcome the problems of production and marketing, government also launched a scheme to mitigate the problem of unemployment.

Self-Employment Scheme for Educated Unemployed Youth (SESEUY) was under such category. However, success of such scheme has been doubtful on account of various pitfalls and misuse both on the sponsorer as well as on the beneficiary's side. Pande (95) brought out some of the deficiencies clearly implicit in the practical implementation of the scheme.³⁰ It was held that "addresses given by the beneficiaries were fake and the money disbursed was either utilised by people who were not eligible for assistance under the scheme or was utilised for purposes other than those stated in their proposals. It is fairly obvious that such malpractices could not have been possible without the connivance of the concerned authorities since the guidelines clearly state that a proper inspection is to be carried out to ensure that person is eligible and that the

30. Study evaluated the functioning of SESEUY scheme during 1986 in Agra, Almora, Allahabad, Jalaun and Sitapur of U.P. State, Ibid, 95.

place of activity (whether shop or shed) is the same as given in the application. Moreover, nearly 8.5 per cent of the sample actually surveyed was of beneficiaries whose household income at the time of getting financial assistance was above the prescribed maximum of Rs.15,000 per annum" (95, pp.102-103). Not only that, there was a discrepancy between the amount of loan sanctioned and disbursed. Generally, beneficiaries received loan, which was much less than what was sanctioned. Also, there was divergence in the allocation of funds. For about 40 per cent of beneficiaries allocated the funds according to their own choice, irrespective of the nature of venture proposed to be established. All these faults clearly demonstrate the manner in which the fundamental objective laid down under the scheme was by-passed.

IV.5 Other Considerations

How far the development of industrial activities influenced the income distribution pattern has also been discussed at length. The study by Papola and Sinha (113) examined the influence of production of stainless steel utensils, aluminium, brass, iron and steel and phool on income distribution.³¹ It was argued that above commodities

31. The study is based on a sample of 600 households from rural and urban areas of the U.P. state. Two districts Sitapur and Lucknow were considered. Further, 400 households from 5 villages (Godhana, Mirjapur, Ahmadpur, Ataria and Manwan) from Sitapur, and 200 households from 4 villages (Deoria, Kalan, Arma and Mampura) from Lucknow district were selected (see Papola and Sinha, Ibid, 113).

come to qualify under 'minimum need fulfilment' immediately after food items. To purchase these non-food commodities, rural households spent Rs.197 and urban household Rs.416 per annum on average. This underlined the negative effect on income distribution due to increased production of non-food commodities. This is so primarily "because a large proportion of a given amount of income in the heads of relatively higher income groups is likely to be spent on metal utensils than if the same income is distributed among the poor, both because the rich buy qualitatively superior and therefore more valuable utensils; and the poor had other competing needs also for the expenditure of additional income. It was concluded that from the view point of poverty removal, the redistribution has no significance, in fact, it has a negative impact" (113, p.128). In addition the study raised some important points : First, shortage of raw materials, rising prices of raw material of utensils and low purchasing power of consumers affected adversely the growth of production of metal utensils. Second, poor marketing network and high mark-up have put the rural consumers at a disadvantaged position than the urban consumers. Third, metal utensils, which are generally used by rural masses as a basic need show a higher labour intensity, which is but accompanied by lower productivity. And fourth, technological condition in metal utensils has been such

that has impaired the employment generating possibilities.

IV.6 Summing Up:

It is suggested that growth of the informal sector has been more spectacular than that of the formal sector in terms of employment. However, average productivity was lower substantially in the informal than the formal sector. Linkages in terms of purchase of inputs and disposal of outputs were found almost negligible or non-existent. Also, based upon the backward and forward linkages, it was found that industrialisation strategy advocated by Hirschman would not yield a fruitful results. Inducement in output is found to impair the other developmental objectives, such as, income and employment generation. It may however be mentioned that the entire linkage analysis is likely to be determined by the economic base of the city economy, such as, land, labour, capital, mineral resources and so on and, therefore, attempts need to be made to interrelate these through direct or indirect linkages. Of course, it would be highly rigorous exercise that could only be done by a field based study at a project level.

It is further underscored that unorganised sector in Uttar Pradesh has been facing several problems on account of shortage of raw materials, outdated technology, which have ultimately resulted in the inferior quality of products.

Thus, such products do not compete well with the superior products manufactured by the formal organised sector.

Besides, the female workers in the unorganised sector are also found exploited in terms of payment of low wages and low chances of getting employment. This holds true across the different activities (agriculture, industry, construction, etc.) as well as at different city levels. Interestingly, a female worker is subject to more exploitation in metropolitan and large city than in the small city. This stresses the examination of hypothesis that entrepreneurs in the metropolitan city are low pay masters than the entrepreneurs of the smaller sized cities.

It has been underlined that wage per worker rises with the size of the unorganised unit and intermediaries play a exploitative role both in narrowing down the profit margins as well as depressing the wages. As far as the former is concerned, it would be advisable to investigate the factors responsible for this, such as internal economics of scale, which take the form of various cost elements like material and other costs of production. For later, it may be useful to examine, the utility of middleman vis-a-vis the level of exploitation. This would bring out sharply the extent of 'essentiality' and 'indispensability' of middlemen in the whole functioning of the unorganised sector. Of course, these issues could only be examined by field based studies well designed in an empirical framework.

Finally, one study discusses the impact of various incentives of the government to enhance the output and employment. It is found that units availing incentives show growth in terms of output and employment. Generally, most of the units demanded a single scheme for availing incentives. However, study shows the discrepancy between the employment generating scheme and its implementation. It calls for the examination of 'rationale' of incentives. Two basic questions are posed essentially in this context, First, what should be the basis for providing the 'subsidy' or initiating a scheme for the employment generation. Should it be based upon 'efficiency' criterion, or 'need' or something else. And second, 'how' to mitigate the problems or deficiencies which generally come in the practical implementation of the 'schemes'. Is it possible at all to surmount these problems? or it is simply a theoretical proposition? These questions, though important they are, can only be answered by a set of field based studies which have yet to be undertaken in fresh manner with a new dimension.

CHAPTER V

URBANISATION, MIGRATION AND POLLUTION

V.1 Introduction

Discussion on urban development and urbanisation has received much attention in urban economics. In India, the percentage of urban population to total population increased from 11 per cent in 1901 to 23 per cent in 1981. The actual number of city's inhabitants increased from 26 million to 160 million over the same time period. Growth of urbanisation was, however, different in different states. Generally, economically backward states showed faster rate of urban growth than industrially advanced states. Uttar Pradesh had the second largest urban population after Maharashtra, but in terms of the share of urban population to population of the state it was at the 15th position among the 22 states of the country in 1981 (68). This chapter discusses the various relevant aspects of urbanisation, migration and pollution.

V. 2 Defining Urbanisation

Defining urbanisation conceptually has always been a problem in the literature on urban development. Generally, two inter-related approaches are used: (1) quantitative and (2) qualitative. Quantitative approach, often called as 'conglomeration approach' is based on 'population size' alone. It implies that all areas 'over certain minimum size of population' are to be termed as urban, whereas, others rural. This approach, however simple, leads to misleading conclusions. This is because it does not take into account many aspects, such as, administrative, political, cultural, historical, demographic and economic considerations'. It is pointed out that "if neither any change has occurred in the predominant economic activity nor any urban characteristics have been introduced, it would be a misnomer to call the area 'urban' even though its population is now larger than the minimum prescribed limit" (62, p.220). On the other hand, qualitative approach in defining urbanisation takes care of all such considerations. Ideally, therefore, any area should only be denoted as 'urban' if its population exceeds 'the minimum prescribed norm' and also it must show a higher concentration in terms of educational institutions, courts of law, police stations, hospitals, public services, sewerage,

pipe water supply, electric lighting etc, besides having predominance in non-agricultural activities, Shastri rightly pointed out that "process of urbanisation is a way of life. It is a continuing process which is not merely concomitant of industrialization but a concomitant of the whole gamut of factors underlying the process of economic growth and social change" (138, p.514). Census reports unfortunately followed only the 'conglomeration approach' in defining the 'urban' as distinct from the 'rural'.

It would be important here to distinguish 'urban growth' and 'urbanisation'. Whereas 'urban growth' refers to the net increase of population of towns and cities, the 'urbanisation' implies the proportionate increase of urban population in relation to a state or a country. Both are, therefore, not identical. This is because if "the rate of growth of urban population is the same as that of rural population so that the actual percentage of urban population remains stable, urban growth has occurred but not urbanisation. If, on the other hand, urban population increases at a faster rate than rural population so that the percentage of urban population in the total population of the country increases continuously, it is a clear indication that urbanisation is taking place" (72, p.223).

V.3 Growth of Urbanisation in Uttar Pradesh

The growth of urbanisation on the basis of 'conglomeration approach', has been quite spectacular in Uttar Pradesh as compared to the national average. The growth of urbanisation in U.P. during 1971-1981, was 4.9 per cent, which was much higher than that in Indian economy (3.8 per cent) (70). However, there were inter-district variations in terms of level of urbanisation in the state. Yogesh Kumar and Shastri (79, 138) highlighted this point clearly. Generally, western region showed a higher level of urbanisation than the Eastern, central, Bundelkhand and Hills. During 1971-1981, number of towns showing 5 per cent growth rate was 8 in western, 5 in Eastern and 2 in Central regions. This portrayed that, although U.P. urbanised over time but the level of urbanisation was uneven, putting western U.P. at a top position, where as, Hill region was at the bottom.

The unbalanced urbanisation pattern in the state was explained by various factors, such as, emergence of class V and class VI towns, increase in small scale manufacturing and informal activities and the poverty induced migration (70). It was held that "in Uttar Pradesh, the towns with less than twenty thousand population have grown at a much faster rate compared to their counterparts

in other states... The proportion of towns reporting a growth rate of above 60 per cent is very low among the Class I (with population over one lakh) and class II towns (with population between 50,000 to 1,00,000) in the state compared to other states.... the growth rate computed after excluding the towns below twenty thousands population is lower in U.P. compared to India as a whole, the two figures being 3.1 and 3.55 per cent respectively... Similarly, the share of state in number of manufacturing units, has gone up from 6.54 per cent to 10.13 per cent during 1961-78 showing the better performance of U.P. vis-a-vis other states with the same level of economic development. This was explained by small scale units.... The development dynamics responsible for the growth of these small units - resulting in larger increases in the share of the state in the number of units than in the employment or value added in the country - has encouraged the growth of the unorganised and informal sector." (70, pp.99-101).

Yogesh Kumar (69) empirically showed that urbanisation in Uttar Pradesh during 1961 was determined by 'pull' factor, which was outweighed by 'push' factor in 1971. In 1981, variables such as cropping intensity, land-man ratio, value of agricultural produce, concentration of industries explained the pattern of urbanisation. Overtime, therefore,

agricultural development became a pre-requisite of urbanisation. The same, more or less, is found true at the regional level. It is held that "the western region which is agriculturally developed registered growth of large number of small and medium towns functioning as big marketing centers for agriculturally rich hinterlands." (69, p.220). Sinha (163), by and large, also arrived at the same conclusion. During 1951, 1961 and 1981, it was found that small towns grew in those districts, which were agriculturally more developed.

V.4 Migration

The role that migration plays in the context of city economy has also been discussed extensively (107). Papola viewed that the role of migration is of 'equilibrating' nature. This is because workers tend to move out from the low productivity, and low income occupations of rural areas to high productivity and high income occupations in urban areas leading to minimisation of the gap between rural and urban income differential. Thus, "the causes and consequences of migration as implicit in the historical experience of the countries concerned thus got recognised as natural, inevitable and universal" (107). However, the availability of job opportunity in urban areas has also been questioned seriously. This is because slower rate of industrialisation and relatively high capital

intensity have adversely affected the employment opportunities. However, this also resulted into the urban unemployment and aggravated the housing problem.

Singh et.al (148) found that historical events were more important in the formation of Lucknow city. It was held that increasing slums, squatters and housing problems were primarily due to the migration process from rural to urban areas. It would be further interesting to discuss as to what factors are responsible for the process of migration. Mehta (76, 81) examined the factors leading to migration. Small land holding, lower level of income of households, higher level of education, larger family size, young age of respondents, were found important motivating factors which led workers to move out from rural to urban areas. It was underscored that owing to migration, the average income of migrant workers also increased 4 times in Farsali Palli, about 3 times in Jarti and 10 times in Uprada villages of U.P. Hill region.³² Khan (64), Bose (24), Rastogi (124) and Majumdar (73) also examined the process of migration. Khan³³ noted that: "a substantial number of males outmigrated from our region. Relative to male population the ratio of outmigration for

32. The study is based on a sample of 205 migrants from two villages (Farsali Palli and Jarti) from Almora district and one (Uprada) from Pithoragarh district of Hill region.

33. The study is based on a sample of 20 villages from the six districts of Eastern U.P. Viz; Jaunpur, Azamgarh, Sultanpur, Faizabad, Ghazipur and Ballia. The reference year of study was 1971-76. Op.cit. 64.

the region is worked out to be 11 per cent, reaching to 42 to 50 per cent in the villages Sadarpur and Chak Bhikari. The rest 18 villages in our sample range between 3 to 25 per cent rate of male outmigration. The inter-village differences in the ratio of outmigration is broadly conditioned by socio-economic status of the village. Predominantly scheduled caste villages or those villages with very poor economic conditions are found to be chronically outmigrating". (64, p.14).

Rastogi (124) similarly stated the reasons for immigration in Kanpur and Lucknow city. "In Kanpur city 51.6 per cent of the surveyed migrants born in rural areas reported that they firstly moved from their villages due to inadequate agricultural land, less incomes, unemployment or underemployment as compared to 36.1 per cent interviewed in Lucknow city. Among the contacted migrants born in urban areas the proportion of those who left their native place due to these reasons varied 8.1 per cent and 20.2 per cent in both the selected cities". (124, p.66). Majumdar (73) also examined the factors motivating for immigration in Kanpur city. It was held that "23.24 per cent of the immigrants, have had the encouragement and support and friends or relatives in the city who could get them some job and help them to settle down. This represents the extent to which the pull factors have operated in the process of immigration. 18.44 per cent of the immigrants came in an indefinite search

for employment with a vague hope that some job or the other will come their way in this growing industrial metropolis.

2.17 per cent settled down in the city just for the attraction of urban life. This makes a total of 43.85 per cent which may be taken to represent the pull migration. The percentage of immigrants who left their homes because of lack of sufficient land holdings is 17.82. 3.61 per cent drifted away from their former homes because ruination of their hereditary occupation and losses in business. Those who have sought an escape from family intrigues and quarrels constitute 2.03 per cent. Those who did not find suitable opportunities commensurate with their educational qualifications in their former homes constitute 2.53 per cent. 1.48 per cent have stated political reasons. These are the refugees from Pakistan who have had to leave their home during holocaust following the partition of the country. Thus, a total of 27.47 per cent may be taken to represent push migration" (73, p.73). Thus, it was the urban pull factor which relatively determined the process of migration from rural to urban areas.

Tiwari (177) examined the structure and causes of immigration in the unorganised sector in Kanpur metropolis. It was found that in 1985-86, 60 per cent workers were migrants, who moved from their native places due mainly to the low level of income followed by seeking temporary

employment, starting business and family conflict in descending order. The study revealed that it was the 'rural push' along with the existing availability of job in the urban informal sector which led to the process of migration. About 93 per cent of migrants gained immediately when they started the first job in the city. On an average, a migrant worker earned Rs.313.85 per month, which was higher by 3 times than the per capita income which they had at their native places (Rs.103.74) per month. In between the first and present job, all migrant workers gained unexceptionally. The study, therefore, confirmed the current rural-urban income differential hypothesis in the context of urban informal sector workers. Generally, young age, higher educational level, family responsibility, availability of low land and its fertility at native places, low level of job opportunity, deforestation, extreme poverty and the urban pull factors were found significant factors motivating the process of migration.

The process of migration was also examined according to castes. In a city Jafri (44) found that proportion of outmigrants was much higher in the case of upper caste (91.6 per cent) than the SC and ST (8.4 per cent). Interestingly, of the total 844 households surveyed in Kumaun-Garhwal region, 35 per cent of households were

outmigrants. Further, outmigrants were least in those regions which offer better employment opportunities, as compared to those having negligible employment opportunities. The out-migrants were least in Dehradun, where as, highest in Pauri Garhwal. Factors underlying in the process of migration were: young, age, less fertility of land, high education, deforestation and poverty.³⁴ Pande, (96), in 1975, indicated the intra-strata income differential in rural Kumaun. This was principally explained by the lack of infrastructure facilities and lack of employment opportunity in the region. As a result, on an average, a worker got employment only for 173 days. Such employment was generally associated with seasonal fluctuations.

V.5 : Pollution Effects

Industrialisation emphasising the growth of heavy and basic industries has been the important economic strategy in India since the Second Plan onwards. Such a strategy, although enhanced industrial output, generated employment and encouraged exports, it had not been without social and economic costs, which generally generated the pollution effect. Whereas industrialisation received an increasing

34. Study covers a sample of 844 households located in Almora, Pauri Garhwal, Tehri Garhwal, Nainital and Dehradun and refers to the period 1971-1981, Op.cit., 44.

emphasis, the by product of it, i.e., pollution, was left relatively unexplored. In Uttar Pradesh, few studies analysed the pollution effects. Most of them are descriptive and very few are empirical in nature.

According to Joshi (56) the impact of pollution was felt in certain parts of Hill region, which primarily takes the form of air pollution, land degradation and damage to private property.³⁵ The study showed that, on account of activities of Almora Magnesites Ltd, air pollution was of utmost importance. "The pollution caused by the company is primarily air pollution and takes the form of emissions of carbon dioxide and fine particles of dust from the kilns. A few years back dust pollution was a major problem in the area and some land in the nearby areas was degraded due to heavy fall-out of dust from the kilns. Recently, however, the company has taken measures to control dust emission by installing cyclonic dust collectors in the kilns. The atmosphere around the factory does not appear any more different from that in other nearby areas, except for little bit of smoke from chimneys, which, however, does not collect but dissipates fairly quickly. The carbon-dioxide emission also does not seem to affect vegetation forests and farms in the vicinity" (56, p.27). The second

35. The study examined the impact of pollution in Almora district of Hill region, Ib. id., 56.

problem on account of environmental effect relates to the degradation of land due to mining. "In the Jhiroli mines of Almora magnisites, the land degradation has two facets. One pertains to the area being mined, and other to the areas below the mines which are affected by debris rolling down the hill" (56, pp. 28-29). The third problem is the damage caused to private property like houses and land crops. It was pointed out that crop lands and houses which are below the 1000 feet area have been damaged due to the "rolling debris and rocks flying wherever blasting is carried out" (56, p. 30). Although, measures have been undertaken to prevent the damage of houses and land crops, the provision of compensation has also been introduced, but the problem still continues.

Jafri et.al. (45), further examined the effect of environment on ground water level. During 1985-86 and 1989, the level of underground water went down by 2 meters in Agra, which was the highest down fall in the state. This had wider implication on the irrigation facility, especially of tubewells. Similarly, in Chauhatna village of Agra Tehsil, the level of underground water went down from 25 and 30 feet to 80 feet, which affected irrigation most severely. In Pura Bhagwan village of Bah Tehsil in Agra district, the level of ground water was beyond 80 feet. Therefore, to overcome such problems, unless appropriate

measures are adopted appropriately to prevent the deforestation, the entire ecology of Agra and its surrounding villages are not safe environmentally.

Jafri (47) suggested that in Uttarakhand of Hill region, the rate of population growth should be reduced and activities like forestry, horticulture, animal husbandry, poultry and so on should be encouraged. This may bring out the ecological balance. Jafri and Rao (42) examined how the infrastructure development affected the ecological system. In terms of length of road, Hills was found about a half of U.P. in 1960-61, but its performance improved during 1980-81 fairly satisfactory than the state. This had damaging effects on eco-system of U.P. Hills. It is held that "in fact the road construction has damaged the fragile eco-system of U.P. Hills, besides the socio-economic order. While cutting the rocks through slopes, the entire Hills were destabilised and affected the valuable forests and opened the areas for regular land slides and floods etc. The accessibility to natural resources like forests and minerals has further aggravated the situation in order to quench the thirst of greed" (42, p.83).

Tiwari and Bajpai (178) also revealed the impact of industrial pollution such as air pollution and water pollution on the welfare of city's inhabitants. It is

found that in Kanpur city, increased industrial activities have generated pollution. Those areas of the city having more concentration of industries such as textiles, chemicals and engineering have experienced a higher level of pollution. Besides, various diseases also increased due to pollution. To reduce the severity of pollution it is suggested to shift the industrial location to outside of the city. However, in doing so, cost of physical capital accumulated since several years back and the nature and the level of demand of products, must be taken into account.

V.6 Summing Up:

To recapitulate the state of Uttar Pradesh during the recent decades showed a higher level of growth of urbanisation than the national average. But simultaneously the level of urbanisation was uneven. Generally western region was at the top position, where as Hill Region was at the bottom. Such a pattern of urbanisation both at the state as well as at regional level was explained by different factors. Where as, higher growth rate of urbanisation of the state was explained by the emergence of class V and VI towns, increased small scale and informal activities and extreme poverty, the region-wise unequal growth of urbanisation was explained by the level of agricultural development and migration. Analysis generally underlined the positive

association between the level of agricultural development of regions and level of urbanisation.

Since migration plays an important role in the process of urbanisation, it is thought worthwhile to discuss factors explaining the process of migration. Various factors such as extreme poverty, higher level of education, larger family size, young age of respondents, low fertility of land, deforestation, low level of income at the native places, lower level of job opportunity, urban pull factor inter-alia were found relevant for explaining the process of migration. These factors taken together, motivated the migration from rural to urban areas, which in turn, added to the rate of growth of urbanisation on the one hand, and aggravated the problems like housing, unemployment and pollution on the other. Studies do seem to suggest that at various space points, pollution problem proceeded with industrialisation side by side. This is true for air and water pollution, degradation of land and loss of private property and pushing down the underground water level.

From above discussion, three important points emerge. First, classification of towns and the examination of urbanisation are basically based on 'conglomeration approach' which takes into account the 'population size'. Other factors like, administrative, political, cultural, economic

and historical have been, by and large, ignored. It would be, therefore, useful if these factors are also taken into consideration while classifying the urban from the rural. An examination of the process of urbanisation based on above considerations would be more realistic and useful than that what had been done so far. Second, the process of migration is seen explained by a gamut of factors, which perhaps, do not provide a clear thinking as to what factors are really significant for determining the migration process. It would be, perhaps, more useful, if migration is explained in a more rigorous manner by applying certain advanced statistical tool such as regression with lagged variables. This is because, at least theoretically, the impact of factors explaining migration is likely to be realised after some time lags. Third, the problem of environmental pollution has in fact received less weightage in the research studies. Theoretically, one may think of the effect of pollution after certain time periods. Equally important with this is also to show how the impact of all types of pollution gets combined and start exerting their negative influence thereby leading to human sufferings. Needless to say, the issues raised both at theoretical as well as at empirical levels could only be examined by a set of studies which are yet to be undertaken in a new dimension.

CHAPTER VI

INFRASTRUCTURE

VI.1 Introduction

Infrastructure plays a key role in economic development. It is realised that "various components of infrastructure such as financial, legal and administrative institutions lead to an increase in the supply of capital. On the other hand, availability of infrastructure facilities like transport, power, skilled manpower etc. creates a favourable investment climate by expanding the size of market and increasing the availability and supply elasticity of the factors of production" (58, p.538). Lack of adequate infrastructure facilities is likely to slow down the rate of economic development. This is true both at the state as well as at the regional level. The development of Uttar Pradesh, as we will discuss later, has lagged behind other states principally on account of infrastructural inadequacies. This has widened the inter-regional differentials. Infrastructure has been classified into two inter-related important categories, i.e., (1) economic infrastructure and

(2) social infrastructure. Whereas economic infrastructure includes such facilities as transport, communication, irrigation, energy, banking and other credit institutions, social infrastructure includes: education, health facilities, water supply etc. We may now discuss first the economic infrastructure.

VI. 2 Economic Infrastructure

Joshi has examined the importance that economic infrastructure has received during Five Year Plans (53). Between First and Sixth Plan, the proportion allocated on irrigation and power increased from 36 per cent to 54 per cent. As compared to this, the significance of social infrastructure was far lower. Ratio of investment between economic and social infrastructure which was 63:37 during the First Plan changed in favour of economic infrastructure during Sixth Plan which stood at 84:16. Among the economic infrastructure certain important changes occurred. During the First Three Plans, irrigation got higher outlays, which thereafter shifted in the favour of power sector. During 1966-78, for about 40 per cent of plan outlays were earmarked on power sector. Similarly, the proportion of plan outlays on transport and communication which was 4.5 per cent in the First Plan increased to 8.9 per cent in the Sixth Plan. Among economic infrastructure, power,

irrigation and transport and communication in descending order received the utmost importance in the Indian economy (58, pp.545-546). Thus, one expects that increasing economic infrastructure must have exerted its profound and positive influence on economic development.

Studies (58, 59, 60, 182) examined in detail the relationship between economic development and economic infrastructure for the state of Uttar Pradesh. Per capita NDP, gross value of agricultural output per hectare and value added per industrial worker were used alternatively as different proxy variables for development. Generally, level of economic development(Per capita NDP) was explained by banking and transport facilities, value of agricultural output per hectare by irrigation and power supply and value added per industrial worker by banking and transport facilities (58). The study, therefore, underlined the positive association between the level of economic development and banking, transport and irrigation facilities. It turns out that agricultural development has enhanced the economic development of the state. Such a finding is also reinforced by another study by Singh (143) at the district level. Tewari (171, 172) has also shown the strong and positive association between agricultural development and infrastructure, whereas, weak relationship between industrial development and infrastructure.

Level of infrastructure of U.P. was compared with the country as a whole as well as across the different regions in the state economy (Joshi, 53). The state of U.P. had lagged behind in terms of economic infrastructure facility vis-a-vis the national average. Also, within U.P. state, there were large gaps between the economic infrastructure in urban areas vis-a-vis the rural and between one region and another. Generally, such facilities were confined, to a large extent, in urban areas, where as, rural hinterland was deprived of them considerably. Such an uneven availability of infrastructure resulted into inter-regional and inter-district disparities in the level of development. Districts of western and central regions continued to enjoy a higher level of development, where as, districts under Eastern, Hill and Bundelkhand lagged behind (58, 60). Ojha (93), over the period 1971-1981 found that as many as 27 districts of the state exhibited a ~~close~~ association between the level of development and economic infrastructure. However, the intra-regional disparities were also revealed. It was underscored that disparities in terms of per capita net domestic product increased in western and central regions, where as, it declined sharply in the case of Eastern, Bundelkhand and Hill regions.

Thus, backward area development approach, was adopted and a separate sub-plan was prepared for the development of Hill areas in Fifth Five Year Plan. Of the total plan outlays, 32 per cent and 11 per cent expenditure was allocated on transport and communication and power sector. However, overtime, the importance of these two sectors, gradually declined and by the Seventh Plan the share remained only 16.24 per cent on transport and communication and 11.60 per cent on power. During Seventh Plan, 90 per cent of expenditure, of the total outlays on transport and communication, was allocated to construct roads and bridges. Expenditure allocated to power sector mainly emphasised the rural electrification and electrification of harijan bastis, tapping micro-mini-hydro-electric potential, strengthening the transmission system and sub-station and developing renewable sources of energy (57). Principal objectives underlying in these programmes were three folds i.e., (1) to increase productivity in agricultural and non-agricultural activities; (2) to strengthen linkage pattern and (3) to diversify economic activities in order to generate the income and employment opportunities.

Papola et.al. (111) revealed that various schemes under 'Minimum Need Programme' did not yield a desired result. Agricultural productivity was lower in the case

of linked villages than the non-linked villages. Similar was also the case with non-agricultural activities.³⁶ As far as linkages are concerned, it has been found weak in production activities. This is because these establishments have been engaged "in supplying of consumption goods produced elsewhere. None of the locally produced goods were sold to these establishments. This is in sharp contrast to plains where even though road transport did not have much of an impact on economic structure, yet it led to a significant increase in trading, processing and service activities and the share of locally produced goods in the trade had also increased." (57, p.558). Similar was the case in regard to diversification of economic activities and the generation of income and employment. It is held that "impact of electrification on economic structure, income and employment is minimal. This is so primarily because electricity is used almost exclusively for lighting purposes and only marginally for productive purposes. The experience of the area studies suggests that merely the availability of electricity does not constitute a sufficient condition for industrialisation of a backward area and creation of

36. "Interestingly it was found that non-agricultural activity, as measured by the number of establishments of various kinds, e.g., tea and other shops, blacksmithy, carpentry, grain milling, oil crushing, tailoring, spinning and weaving had declined in terms of number of workers and number of establishments in the linked village after construction of roads, while it had increased in the non-linked village during the same period", (See Joshi, Op.cit., 57, p.558).

more jobs outside the traditional agricultural sector" (57, p.561). Study by Sinha et.al. (164) more or less falls on the same line. The study showed that road transport had not benefitted the needy masses, which mainly served the demand of better-off sections of society. Main reasons underlying were the lack of financial resources with the state government. To overcome this, central government should extend their financial support to the state government and both the governments should encourage the transport sector as a whole. Also, the function of the UPSRTC should be streamlined so as to cover the remote and unserved areas. In addition, private means of transport should also be encouraged. Impact of transport for different sectors was also discussed. Mehta (77) found that road transport had a little impact to raise the yield ~~rate-of major~~ food grains and pulses. However, the impact of transportation was felt more on development of non-agricultural activities.³⁷

Pande et.al (97) looked at the performance of improved chulha in Eastern and central regions of Uttar Pradesh. It was satisfying that improved chulha not only saved the cooking time and consumption of fuels but also it was smoke less.³⁸

³⁷. The study relates to a sample of 50 households in hill villages surveyed during 1979-80.

³⁸. The study is based on a sample of 1032 households in rural areas of Eastern and Central regions of U.P. state in 1986.

VI.3 Social Infrastructure

We may now discuss social infrastructure which includes education, water supply, housing and health facilities.

First we take up education. Ashraf (12) examined the various aspects of growth of education in U.P. Over the period 1946-47 to 1985-86, budgetary allocation for all education increased from Rs.318.50 lakhs to 66,228.27 lakhs. This consequently resulted into the sharp increase in number of junior and senior basic schools, number of teachers, enrolment of students and pupil-teacher ratio, over the same time period. However, the condition of schools was found far from satisfactory. About 15 per cent of basic schools and 9.20 per cent of senior basic schools were found without buildings. Situation was more worse in rural areas, where, only 55.97 per cent of junior basic schools had adequate mats/furniture and only 53.9 per cent had blackboards. In the senior basic schools 71.28 per cent only had adequate mats/furniture and 75.72 per cent had black boards. Similarly, only one-third of junior and 55.1 per cent of senior basic schools had the text book banks and 23.3 per cent and 59.6 per cent had library facility respectively.

Ashraf and Papola (13) also looked into the enrolment, attendance and drop out situation of students.³⁹

39. Present Study is based on a sample of 52 schools 7336 households, 59 villages, 4 towns located in 4 districts of Uttar Pradesh (Ashraf and Papola, Ibid., 13).

"Percentage of children in the household currently at schools to the total children in the household, in the age group 6-14 years comes to 67 per cent, 75 per cent for boys and 55 per cent for girls. In the rural areas it was 63 per cent where as in urban areas 83 per cent". (13, p.593). Also, 53 per cent pupils were regular in rural areas, while 31 per cent in urban areas. As far as dropouts were concerned, on an average, 22 per cent school going girl students were dropouts, which was higher by 12 per cent as compared to the boys. Highest dropouts were found existing in class I and II, which varied from 30 per cent in rural to 25 per cent in urban areas. Further, enrolment of children population ratio was found highest in upper caste Hindus (80 per cent) followed by muslims (58 per cent) where as it was minimum in the case of SC and ST (53 per cent). Extreme poverty was attributed as the principal causal factor for existing level of enrolment, dropouts and continuation of education for students. Level of per capita income of household was, therefore, found related positively with enrolment and continuation of education both in rural as well as in urban areas (12, 13). Muzamil (91) and Mehta (75, 78, 80) examined the various aspects of education. Mehta found that enrolment rate for men was higher than the women and that differences widened with the levels of education. Moreover, dropout ratio was lower

in women than the men in middle and secondary levels of education, but reverse followed in primary and high schools. This also influenced the employment and earnings. Generally, unemployment rate was greater for women than men. Earning increased with the educational levels. Men with educational level of primary and middle school earned more than the women with same level of education. But women, having education upto primary and higher levels earned more than the men.

Verma et.al. (186) focussed on a fundamental issue, that of the equal opportunities of education for different classes of society. It was stressed that, in spite of reservation drive for deprived sections of society, the present education system benefited them very marginally. Despite the increase of various educational institutions, the quality of education has been far from satisfactory since Independence. Kakkar (63) laid emphasis on restructuring of the educational system. This was thought necessary because the existing level of education failed to ensure the jobs. It, was therefore, suggested to provide vocational training to the candidate after passing intermediate levels according to their aptitudes.

Papola and Ashraf (112) looked closely into the poverty aspects. It was found that though poverty among

the scheduled caste and scheduled tribe declined from 84 per cent to 80 per cent during the decade, the poorest among the poor scheduled caste had, however, not been benefitted. Those who were benefitted belonged to isolated and better-off sections of scheduled caste communities. But, inspite of all these, the average income, level of literacy and enrolment of children in case of SC/ST were far higher than the non-scheduled caste and non-scheduled tribe families. This had been possible because scheduled caste and scheduled tribe members were absorbed in the wages/salaried paid jobs. Study showed that scheduled caste members employed in paid jobs increased substantially from 5 per cent to 30 per cent during the decade, which encouraged to educate their children.

Drinking water is equally important in social infrastructure. Generally, studies have underlined the scarcity of drinking water both in plains and in Hill areas. Pande and Bajpai (98), found that various programmes launched by the government were effective but still more attempts had to be made to extend the water facilities quickly as well as equitably.⁴⁰ Joshi and Singh (53) reached the conclusion that most of the residents of

40. The study considered 6 districts of the state of Uttar Pradesh 3 each from Eastern and Western region during 1971-72 to 1984-85.

Jajmau (Kanpur) and Mirzapur districts are prepared to make contributions to enhance drinking water facility. However, since government has already provided drinking water, there is, in fact, no need to force residents to make payment for such purposes. Jafri (46) evaluated the drinking water supply in rural Hills. Of the 75 sampled villages, 40 villages were all that were provided tap water facility. Such facility was in the form of community taps and spring taps, which were extended to 45 per cent and 39.60 per cent households respectively. However, one-fourth of the respondents using tap water were not satisfied with respect to the quality of water, while more than half of respondents expressed their dissatisfaction in terms of the quantity of water supply.⁴¹

Housing is yet another problem in U.P. which has attracted the attention of planners and policy makers. Singh (160) underscored that housing problem is essentially deplorable for scheduled caste and scheduled tribes than the other communities. Scheduled caste and scheduled tribes constituting 23 per cent of population in rural areas, were found without adequate houses. Under the Minimum Needs Programme, two schemes for SC and ST were launched viz., (1) allotment of house sites and (2) financial help for

41. The study considered a sample of 75 villages in 9 districts of Kumaun and Garhwal regions.

construction. During Fifth Five Year Plan, Rs. 97.77 lakhs were proposed in U.P., which increased to Rs. 297 lakhs at the end of the plan. By the Sixth Plan, Rs. 2800 lakhs were allocated for construction of houses for SC and ST. It is dissatisfaction that only 18.46 per cent of SC/ST families have been benefitted from these schemes. Therefore, as a step further, Harijan E�am Nirbal Varga Avas Nigam was introduced for extending the housing facilities for SC and ST. This scheme had five functions to perform, such as, (a) financial assistance for house construction; (b) development of house sites; (c) repairing of houses; (d) hostel construction; and (e) other developmental works. Although, such schemes have been quite successful, but still more needs to be done in future. It has been emphasised that most of the programmes including present one can only be made successful provided the cooperation is assured by the local people and under given the local factor endowment structure condition, government can only play an initiating role.

Rastogi (124), Tiwari (180) and Agnihotri (3) also examined the housing problem of the city's inhabitants. Rastogi found that, "larger proportion of the migrants from the rural areas lived in Kachcha or thatched houses and in one room tenaments without any source of water supply and without toilet in the house as compared to migrants from urban areas or non-migrants.... Those who reported to live in

single room tenements was reported between 49.2 per cent to 69.2 per cent among migrants from rural areas as compared to between 18 per cent to 32 per cent among those migrated from urban areas. Between 29 per cent to 38 per cent of the migrants from rural areas... reported to have no drinking water facility in their houses while proportions of those without water facility within the houses varied between 3 per cent to 33 per cent among migrants from urban areas and non-migrants", (124, p.93). Tiwari (180) found that in the sample of 200 households of Kashmiri ward of Lucknow city, 69 per cent houses are pacca; 14.50 per cent mixed type; 12.50 per cent Kachcha and rest are either covered by tin shed or chhapper (hay shed). Also, mixed houses are found oldest one (61 years) followed by chhapper (hay shed) (51 years) and pacca houses (47 years). Tinshed and kachcha houses are found older by 38 years and 30 years respectively. The average age of the house is worked out at 44.12 years. The major problems of housing is the lack of courtyard Baramda and bathroom facilities. (180, pp.43-44).

It may be recapitulated that various programmes of development ultimately result into the welfare of the people. Health is an important indicator of welfare, which is determined by death rate, birth rate, infant mortality and life expectancy. Studies (137, 162, 166, 15) examined the above aspects. Sharma (137)

underlined that whereas death rates in the state were controlled, the state had been far behind in terms of raising the life expectancy and infant mortality. State in these respects was found at the bottom among 12 states of the country. Further, there were disparities in terms of health facilities. Such facilities were confined largely in the urban areas, whereas rural areas were relatively ignored. Study by Jafri (48) has confirmed this strongly. It is held that "the maximum proportion of population suffering from various diseases belong to Almora (11.50 per cent) and Tehri (9.26 per cent). Gastro Intestine and eye-infection are the major serious diseases by which 1.84 and 1.53 per cent population are affected respectively. In Almora, Gastro Intestine, eye-infection and T.B. are rampant where 3.55, 2.17 and 0.66 per cent people are affected by respective diseases." (48, p.52). It is found that most of the patients do not visit the doctors. The main reasons underlying are the distance of the hospitals, lack of medicines and over all defective policy of management of hospitals. Singh (161) revealed that present health facilities in three districts of Meerut, Agra and Etawah were mainly given to a few affluent groups. Therefore, it needs to be decentralised, where participation of common people is extremely important. Committees at block and village levels may be useful in order to mitigate problems arising on account of scarcity of health facilities.

Ashraf (15) Saxena (130), Seth (132) and Sethi (133) looked at important factors underlying the infant mortality, fertility and family planning. It was found that infant mortality was higher for such children who did not get 'breast feeding' followed by 'malnutrition'. This was found true both for plain rural and Hill population groups. Other factor was the marriage at early age. Generally, girls upto the age groups of 15 years get married. However, family with large number of children had lower IMR than those with smaller number of children. It would be advisable that nutritional food among the economically weaker section groups should be distributed equitably.

VI.4 Miscellaneous Studies

Studies have also been undertaken to examine the rural industrialisation. Papola (116), Papola and Mishra, (117) Mathur and Majumdar, (74) and Tiwari, (181) examined the growth of rural industries, its employment and income potential and the role played by the middleman. Papola, for instance, states that: "No doubt, the traditional village industries and crafts continue to engage a major part of the industrial workforce; but a number of industrial activities, which were not traditionally a part of rural scene, have started playing a significant role in the generation of employment and incomes in rural areas. What is of greater significance is the fact that most of these activities have been economically more rewarding than the

traditional ones, and have provided remunerative employment and have shown a relatively better growth potential. The emerging pattern of industries and their performance, therefore, indicate that rural industrialisation may be a relatively more effective means for the generation of growth and employment in rural areas by utilising potential of new industries and of the traditional ones". (116, p.93). Despite the fact that rural industrial activities were the major source of income and employment generation, the traditional activities - pottery, bamboo basketry leather, toys, rope and bidi making had hardly met the criterion of "minimum income" to the households engaged in them. On the contrary, new rural industrial activities - wiremeshing, lampshade and hub-brush manufacturing were found as a generator of income above the subsistence level. The study, therefore, sharply brings out the income generating potential relatively more in non-traditional rural industrial activities than to that of traditional activities. Further, study underscores the lack of demand primarily due to the inter-unit competition shortage of raw materials, the role played by the middleman and above all the technological backwardness. The exploitative role by middleman has been amply reflected in the study of Mathur and Majumdar (74). Similarly, shortage of raw materials and inefficient marketing network were found

important constraints for the growth of KVI sector in the state of Uttar Pradesh (181). For the policy view point, it was suggested that technology should be improved. However, the technology should be such that correspond not only with the availability of local manpower and raw materials, but also it should aim to generate the income and employment to a considerable extent. Therefore, the stress must be on the generation of productive employment rather than creating the spurious employment. It was strongly recommended that policy measures should be such that must consider the "growth potential rather than mere survival of rural industrial units. An approach mainly relying on subsidy and assistance on individual basis may help them to survive; but it will not enable them to grow. It is necessary, therefore, that emphasis should be laid on "planning" for the development of industries in rural areas and that the exclusive reliance, so far placed on the "assistance" approach, is given up." (Papola, 116, pp.99-100).

VI.5 Summing Up:

The overview of studies on infrastructure per-se suggests that economic infrastructure has received an important place in India's planning process. Over time, economic infrastructure, such as, power, irrigation, transport and communication increased, which stimulated

the development of the state economy. Generally, agricultural development followed by banking and transport facilities were found as a pre-requisite for the development of the state. However, unequal distribution of economic infrastructure led the unbalanced intra-regional development. However, the expansion of transport facilities led to an increase in the productivity of non-agricultural than the agricultural activities.

As far as social infrastructure is concerned some points deserve special consideration. Over the period 1946-47 to 1985-86, budgetary allocation on all education increased in U.P., which led to an increase in junior and senior basic schools, number of teachers and pupil - teacher ratio. However, the condition of schools reported to be extremely miserable. Generally, facilities in the urban based schools were better than those located in rural areas. Further, the caste-wise enrolment of children was found highest in upper caste and muslims, where as, lowest in scheduled caste and tribes. Extreme poverty was found to explain this phenomenon. The earning was found directly associated with the levels of education. However, a debatable discussion followed. Where as a study underlined the low level of educational opportunity for deprived sections of population, an other study refuted this proposition. It argued that

scheduled caste communities had the higher level of literacy, enrolment of children and employment. Drinking water facilities were generally found inadequate both in Plain and Hill villages of the state. Also, quality as well as quantity of water supply was found extremely unsatisfactory and inadequate. Housing condition was found deplorable for SC/ST in the state. Although, fund allocated to the housing increased over the years but it has not reached to the most needy persons. Programmes for housing had made some efforts but still the cooperation of local persons, needing houses is yet to be ensured. Government perhaps is supposed to play only a initiating role.

It may be underscored that infrastructure both economic and social should be oriented towards the welfare of masses. It was however not so. Health condition, determined primarily by death rate, birth rate, infant mortality and life expectancy were generally unsatisfactory in U.P. vis-a-vis various states of the country. It was mainly attributed due to the unequal distribution of health facility between urban and rural areas, high infant mortality was found determined in turn by the lack of 'malnutrition' and inadequate 'breast feeding'.

From the above, three points need to be considered for further examination. First, economic infrastructure especially irrigation, banking and transport facilities were found to have stimulated the development of the state. It would be pertinent here to think about the root causes leading to irrigation, banking and transport facilities. Is it 'efficiency' 'cooperation by the people', 'governmental programmes' etc., or reasons lie somewhere else ? Similarly, villages with better economic infrastructure were found to have performed poorly than those which were devoid of such facilities. It would be, therefore, more useful to trace out the factors which inhibited the performance of economic infrastructure prone villages. This, of course, could be examined only by field based studies over time and space. Second, a study suggested that education facility was not distributed equally and as a result, scheduled caste and scheduled tribe communities could not receive education to the extent to which it was available to non-scheduled caste and non-scheduled tribe communities. However, an other study opposed this view point. Therefore, considering the above points, it would be pertinent to re-examine such a proposition with the help of study designed in a more quantitative framework. And third, studies

suggested that health facilities were unevenly distributed between rural and urban areas and that infant mortality was determined largely by 'early marriage' 'lack of breast feeding' and 'malnutrition'. It would be pertinent here to reaffirm such a finding before adopting any policy measures. In view of this, it would be essential to carry out a set of studies in different areas in an elaborate econometric framework. It might help in exploring the contribution of various factors such as, social, economic and environmental in order to explain the level of infant mortality in Uttar Pradesh.

CHAPTER VII

FUTURE RESEARCH DIRECTION

This chapter gives the guidelines for further research. It may be mentioned that development of state economy largely depends on the development of agriculture, organised and unorganised industry, urbanisation process and the level of infrastructure. Therefore, if the problems faced by these sectors are realistically identified and the gaps in the knowledge of literature are indicated, it would help the researchers and policy makers in overcoming the various problems that crop up in their research work and plan formulation for the state of Uttar Pradesh.

In the state of Uttar Pradesh agriculture plays an important role in the process of economic development. On the basis of general discussions, some salient features are worth noticeable. First, the overall performance of agriculture was satisfactory during the post-green

revolution period than that during the pre-green revolution period. Also, generally, agricultural performance was better in western region than in Eastern regions of the state. Second, marketing network was found generally inefficient, which, resulted in the unequal appropriation of surpluses between the producers and the sellers. As a result, commission agents extracted the larger part of the margins, which would have otherwise gone to producers. Third, the technology in agricultural sector was generally characterised as capital intensive, which, in turn, generated the unemployment problem. However, at the same time, it also enhanced the larger output in agricultural sector. And fourth, owing to various problems and constraints, various developmental programmes failed to raise the income level of the beneficiaries. In the above background, it is essential to undertake research studies in new directions, which may incorporate the following specific points: First, a study needs to be undertaken which would consider the homogeneous indicators of agricultural development. May be that an appropriate composite index of agricultural development is required to examine the level of development of agriculture at region, district and block levels. Second, study at a project level is needed to examine the distribution of surpluses between the producers and commission agents. Also, such study must examine the

"essentiality" and the "utility" of the commission agents.

Third, study at a project level is also needed to understand as to how far the use of capital intensive technology displaces the human labour in the agricultural sector.

The degree of displacement of labour might be different in varying districts, blocks and villages. Fourth, study needs to be carried out to show the impact of various developmental programmes on the growth of agricultural sector and its impact on income levels of beneficiaries.

Such study must reveal appropriately the problems or deficiencies, which lie both on the side of government and the beneficiaries. Fifth, study at a project level is also required to investigate in depth the rationale of the land use planning and the use of economic resources at the district, block and village levels. And sixth, a set of studies are required to show the interlinkages between agriculture and industry. This is because forward and backward linkages determine the overall growth profile of the region, where agriculture is an integral part.

Studies on industrial development indicate the following specific points. First, U.P. has lagged behind in terms of industrial development than the many states of the country. Also, there emerges inter-regional industrial development variation. Generally, west U.P. was industrially

advanced region, whereas, Eastern and Bundelkhand regions were backward industrially. Second, U.P. followed the classical pattern of industrial evolution. Over time, consumer goods industries which constituted the dominant component in industrial structure in U.P. during early 1960s were seen outstripped by the capital goods industries during 1980s. And third, inter-industry linkages were found weak in the state economy. This was, specifically noted in the case of metal engineering industry in Kanpur. Thus, based on the discussions, a set of studies need to undertaken incorporating the following specific points: First, it would be useful to carry out a study, which may realistically reveal the contribution of factors for low level of industrial development of the state and must spell out the reasons for intra-regional industrial development disparities. Such study designed at a project level must explore the role of certain factors, such as, climatic and soil differences, differences in availability of skilled personnel, agglomeration economies, internal economies of scale, availability of infrastructure, differences in attitudes of entrepreneurs and above all the impact of differential policy incentives pursued by the government. These factors should also explain the industrial transformation of Uttar Pradesh. And second, a set of

studies are required, which must show the state of interdependence of industrial system at the state or at the district levels. Such a study, besides revealing the first order effect, must also examine the second order effect. This is because the examination of general interdependence of the industrial system is important to understand the income and employment potential of the state or the regional economy.

Studies further discussed the functioning of the unorganised sector firms in terms of input purchases and output disposals. Generally, unorganised firms had the forward linkages to a certain extent. However, direct linkages such as input purchases and output disposals were weak between the unorganised and the organised firms. Generally, unorganised sector firms were found uncompetitive vis-a-vis the organised sector firms both in terms of quality of products as well as the productivity levels. Workers engaged in the unorganised sector were generally found exploited in terms of payment of wages. Also, female workers were seen discriminated in terms of job availability vis-a-vis the male workers. Wages were found as a function of size of unorganised sector unit and intermediaries played an exploitative role in the overall functioning of such units. Further, units with governmental

assistance portrayed a higher output and employment growth than to those units without policy incentives. Given the framework of studies per se, a set of research studies are called for which may consider the following specific points. First, studies need to be undertaken to explore the relationship between the linkage pattern and the economic base of the city, such as, land, labour, capital, mineral resources and so on. Second, studies are required which should reveal the contribution of factors responsible for the exploitation of workers engaged in the unorganised sector both in the metropolitan and in the small cities. Further, a set of studies, revealing the wage differential in large and the small cities, would also be useful. Third, studies are also essential which may reveal the role of factors, such as, internal economies of scale and various cost factors to explain the relationship between the wage level and the size of unorganised units. Such studies must also research the element of 'utility' and 'essentiality' of the middlemen-vis-a-vis the level of their 'exploitation' in the unorganised units. And fourth, studies in an empirical framework is called for to provide comprehensively the appropriate basis for extending the policy incentives to various firms at different space points.

Studies further discussed the urbanisation, migration and pollution effect relating to the state of Uttar Pradesh. U.P. experienced a higher growth of urbanisation than the national average. However, such growth level was highly uneven. Generally, western region portrayed the highest level of urbanisation, where as Hill region the lowest. Besides, various studies also discussed the extent to which migration affected the growth of urbanisation. A gamut of factors were held responsible for speeding up the process of urbanisation. Further, negative aspect of industrialisation such as pollution was also discussed. Generally, it was found that those space points being dominated by textiles, chemicals and engineering goods in the city were more pollution prone than those without having concentration of such industrial activities. Based on the above discussions, studies need to be undertaken, which may consider the following specific points: First, study in a new dimension is required, which may reclassify the towns. This is because, the 'conglomeration approach' followed by census reports is not satisfactory. This is because such approach only takes into account the 'population size' alone. Therefore, studies, classifying the towns on the basis various factors, such as, administrative, political, cultural, economic and historical are called for. May

be that such studies must attempt to classify the towns on the basis of 'composite index' or 'principal component approach' incorporating the various economic and non-economic factors. Second, various studies on migration do not, in fact, provide a clear thinking as to which factors are responsible for the process of migration. A set of studies, therefore, required to reveal the role of specific factors with a more quantitative precision causing the migration and the contribution of migrants in the development of the cities. And third, studies on pollution are still at a infant stage, which need to be undertaken in a more comprehensive manner. A set of studies, therefore, need to be carried out, which must show as to how the industrialisation may proceed without creating the pollution in the urban metropolis and in the small towns.

Various studies also discussed the economic and social infrastructure. Economic infrastructure - power, irrigation, transport and communication - on the one hand, stimulated the process of development, on the other, unequal distribution of economic infrastructure resulted into the unbalanced development between the different regions. The expansion of transport facilities enhanced the productivity of non-agricultural activities than the agricultural activities. Social infrastructural

facilities were unevenly distributed between the different regions. This, in turn, resulted into unequal distribution of education, health and housing facility between urban areas and the rural hinterland. Generally such facilities were less adequate in the rural areas. Also, the condition of SC/ST was more deplorable than the rest of the communities. Also, health condition was found unsatisfactory in U.P. vis-a-vis the other states of the country. Thus, a set of studies need to be undertaken, which may incorporate the various relevant points: First, studies with a more quantitative precision, is required, which may reveal the root cause of development. Second, studies have to be undertaken which must attempt to examine the role of factors leading to productivity differentials between the agriculture and non-agricultural activities. Third, studies are needed which must reveal the role of factors leading to the pitiable condition of the scheduled caste and scheduled tribes in terms of the educational attainment, poor housing, health and so on. And finally, a set of studies are required to be undertaken in an elaborate econometric framework to reveal the contribution of factors determining the infant mortality at a state, district and block levels. These are some of the tentative research guidelines, which need to be incorporated in a set of studies that are yet to be undertaken in a new dimension.

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